CELT
COLLECTED ESSAYS
ON LEARNING
AND TEACHING

Volume II
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A World of Learning
L’univers de l’apprentissage

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Collected Essays on Learning and Teaching

A World of Learning

Volume II
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The Editors of *Collected Essays on Learning and Teaching (CELT)* are pleased to present Volume II of this successful, innovative electronic publication associated with the annual conference of the Society for Teaching and Learning in Higher Education (STLHE). Volume II features a remarkable 36 peer-reviewed essays, appearing after an extensive process of submission, revision, and editing.

The idea for *CELT* dates back to the 2005 STLHE conference hosted by the University of Prince Edward Island. From the beginning, the intent has been to encourage conference presenters to put the essence of their workshops and concurrent, round table, and poster sessions in essay form for a wide readership interested in teaching improvement practices in higher education. Once the *CELT* structure and format were established, the editors invited those who presented at the 2007 conference at the University of Alberta to submit to Volume I. The invitation resulted in the submission of 35 manuscripts, of which 25 appeared under the theme of “Evolving Scholarship.” A CD of the first volume was distributed to the 430 participants at the STLHE conference hosted by the University of Windsor in June 2008, and further copies went out to the Society’s institutional members. The entire first volume of *CELT* can now be accessed on the STLHE website.

The current volume of *CELT* includes 36 articles arising from material and data presented at the STLHE conference in Windsor in June, 2008. The articles were chosen after a peer-review process of 42 manuscripts. The fact that there is no printing involved in producing this annual journal has allowed us to expand Volume II of *CELT* without increasing costs. The 2008 conference theme “A World of Learning” supplies the inspiration for *CELT* this year. The theme explores assumptions, practices, challenges, and possibilities of internationalization, broadened world views, and the impact of globalization trends in post-secondary settings. The theme also celebrates the many worlds that co-exist within any learning institution.

The structure of Volume II traces major stages in the teaching and learning process as they relate to the theme. Section I deals with Preparing to Teach in a Diverse World of Learning, Section II with Enhancing Practice in a World of Learning, and Section III with Assessment, Evaluation, & Reflection in a World of Learning. Although the majority of the contributors work in Canadian universities and colleges, others work in universities in the United States, Australia, and the UK, and the two French language articles were submitted by colleagues from Belgium. Please feel free to explore *CELT* in the order most convenient to you, and to print out one or more of the articles to read and to consult at your leisure.

The Editors once again thank the authors, the reviewers, and the staff of the Centre for Teaching and Learning at the University of Windsor for their ongoing efforts to produce *CELT*. We look forward to examining the theme of the STLHE conference “Between Two Tides” in Volume III of *CELT*, to be distributed at the 2010 Society conference in Toronto.

Alan Wright, Margaret Wilson, & Dawn MacIsaac
A Message from the President of the STLHE

I am excited to share with you the second volume of *Collected Essays on Learning and Teaching (CELT)*. *CELT* is an anthology of peer-reviewed papers written by presenters at the annual conference of the Society for Teaching and Learning in Higher Education (STLHE). Hosted by a different Canadian institution each year, the conference provides an opportunity for university and college administrators, faculty, educational developers, and students to share their best practices, discuss challenges encountered in the classroom, and present their scholarship of teaching and learning.

This volume of *CELT* features thirty-six articles based on presentations at the 2008 STLHE conference hosted by the University of Windsor in Windsor, Ontario. Each article was reviewed by three individuals from across Canada through a blind peer-review process. On behalf of the entire STLHE, I thank these reviewers for their committed service and congratulate all of the authors whose articles were accepted for this volume. I especially thank the editors – Alan Wright, Margaret Wilson, and Dawn MacIsaac – for their hard work, vision, and leadership. In addition, I am very grateful for the many long hours and close attention to detail devoted to this project by members of the coordinating team from the University of Windsor led by Jessica Raffoul, the Managing Editor, and Peter Marval, the media artist who worked on the layout.

Finally, I hope that you will be enriched by reading the outstanding articles in this volume and that you will consider submitting your own scholarship of teaching and learning for possible publication in the next edition of *CELT*.

Sincerely,

Joy Mighty
STLHE President
Section I

Preparing to Teach in a Diverse World of Learning
“Hop on the bus, Gus. Make a new plan, Stan.”* What are some techniques to hook or ‘lure’ learners and to keep them motivated? Knowing the diversity of students, their interests, backgrounds, and preferred learning styles, no single technique will be successful all of the time. This paper describes a large number of ways teachers can engage students with course material and objectives, citing examples from the author, participants in a 2008 Society for Teaching and Learning in Higher Education (STLHE) conference session, and web resources. After reading this paper and checking out some of the many hotlinks, readers will have ‘more spice’ to add to their teaching repertoire. We all want to help students learn. Let’s see if we can add 50 ways to do just that. “The answer is easy if you take it logically.”*

Introduction

Welcome to an essay in the form of a numbered list. It is organized into five basic topics in teaching and learning. Each numbered item is a suggestion of something you might do in your teaching. You will also find examples from my own teaching or from participants in the 2008 STLHE session at the University of Windsor, as well as references for future exploration, in the form of web links or related tips. Ready to get on the bus?

Starting and Ending

1. Get to know your students in your first class. For example, ask “who are you?” By show of hands, we found that instructors in charge of a course or as part of a team, undergraduate students, graduate students, administrators, educational developers, and librarians attended the STLHE session.
2. Break the ice. Do a web search for ‘icebreakers’ (or the related ‘energizers’) for examples,
or visit http://www.kimskorner4teachertalk.com/classmanagement/icebreakers.html

3. Play bingo – human bingo that is. This is a great way for students to get to know each other early in the term. I can send you a word template I have used in the past.

4. Connect learning objectives to assignments in your course outline/syllabus; see http://www.nwlink.com/~donclark/hrd/templates/objectivetool.html for an example.

5. Show your students what they have to look forward to in the course.

6. Invite your students to start some classes. Example 1: Schedule student presentations for the start of class, followed by your presentation. Example 2: For informal ‘show and tell’ in my ecology course for non-science majors, I asked students to sign up on particular dates to do presentations or interactive lessons. On these days, when I arrived to class, I went to the side or back of the room to be one of the participants; the students knew the order in which they would speak. I let them run things until the session was over.

7. Ask students “what’s news?” to link current events/issues with the course. For example, in an international business course, an instructor asks students to collect news items that relate to the topic and bring them to class to share and discuss.

8. End the course the way you started – motivate students to keep active in the discipline. Example 1: On the last day of a course related to the environment, a media article from that day was read to the students, informing them of a new, controversial road development that could threaten a special habitat. By simply bringing this news to their attention, you can bet that many students will follow the story, and maybe even get involved locally! Example 2: In an English course, you could ask students to write at the start and again at the end of the course about the value of the course topic.

9. Form an advisory team of course alumni. For example, I have invited any and all students to be part of this group, sending them drafts of next year’s new or adapted assignments and related course plans for input. I found that they really appreciated being asked, and always gave good advice that I made sure to incorporate.

10. Build on projects completed by the previous year’s students. This approach is well-suited to community service-learning projects and can show students that such initiatives are not only academically challenging, but worthwhile over the long term. Examples and resources can be found at the Canadian Alliance for Community Service-Learning website at: http://www.communityservicelearning.ca/en/

Goals of the Projects


12. Hear your students’ ‘voices’ in every class, through informal discussion or other oral formats, brief writings, drawings, or other contributions shared with the rest of the class, or just with you, in a variety of formats and frequencies. For example, ask students to share a story or narrative that relates to the topic of the class or course.

13. Try out a cubing writing exercise. For example, I first heard about and practised this activity in a session on teaching portfolios led by Barbara Cambridge. Check out this Humboldt State University example: http://www.humboldt.edu/~td22/Cubing.htm

14. Include opportunities for students to do reflective writing, even if it is not shared.

15. Include ‘fill-in-the-blanks’ in your PowerPoint slides.

16. Require a ‘ticket to class’ to ensure pre-reading or class preparation is done. For ex-
ample, I have used this technique to prepare students for a computer lab led by a librarian to help students find scholarly material in the discipline. During the class before the lab, I gave students a brief newspaper article to read, and a coloured slip of paper (three different colours). Those with the blue slip were asked to do the first question (e.g., after reading this article, what questions does it raise for you about further research?), and so on. Each colour corresponds to a unique question that students have to answer and bring to the computer lab. Some years, I have given a small mark, such as 1%. Either way, I find this technique ensures that all students have read the material, and prepared for the session. What they write is also helpful to the librarian so that she could allude to some of their responses as she worked through the lesson.

17. Design certain assignments that students can submit by email (to you or to the whole class) or via the web (such as an online discussion room posting) – you may see another side to your students. For example, in a class on psycho-medications, an instructor asked students to write 10 things they know for sure; then, they went away to prove or disprove, using text references and evidence for their views. This was done with up to 30 students.

18. Invite total participation through ‘think-pair-square-share,’ where each person first talks to someone next to them (to answer a question or issue you pose); after a couple of minutes, each pair finds another nearby to share what they talked about. The instructor can then do a number of things as follow-up, such as ask for one or two examples, invite a show of hands about how similar (within each group) contributions were, or have them take part in another activity based on their group work.

19. Start a jigsaw: each student is an ‘expert’ on one part, and all students must work collaboratively to get the full picture. Have experts in the area get together first, so they become more knowledgeable, then return to the broader group where each one is the expert. Research has shown that we learn by teaching. For an assessment, individuals or small groups do the work. The instructor asks them questions – any member. Higher marks often result. For example, this technique was used in a theatre class to learn multiple responsibilities of each person in a production.

20. Ask students to “think of a time” that relates to today’s topic, and draw, write, talk, or think. For example, during the STLHE conference session, I asked for a show of hands of how many people used each technique; there were some for each category.

21. Create lots of time on task during class time, one of Chickering and Gamson’s Seven Principles for Good Practice in Undergraduate Education: http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/7princip.htm

22. Throw a snowball! Pose a question to students (it can be factual, but this activity is better suited to open-ended questions about their own experiences or views). Ask them to write their answer on a half-sheet of paper that they will not be keeping, something they are comfortable sharing with others. Then ask them to crumple their paper and toss it (gently) into the crowd. Now, everyone picks one up. Ask students to read what is on the snowball they un-crumpled (to themselves, or share with another, or ask for some examples to be read aloud). For example, when teaching psychology statistics, I find that many students are math-phobic. So, I ask them all, at the start of the course, to “write all your feelings about the topic, then crumple it up and throw it away, because it does not have to be that way. In this course that is just what we will show.”

23. Take a hike or a walk outside, in the field (the field can be just outside the classroom), or you can bring ‘the field’ to your class, through the use of objects, videos, and pictures. Your course has a connection to the real world – show it to your students.
How’s It Going?

24. Conduct mid-term feedback (also called concurrent feedback). Check out this article on benefits and challenges from the Science Centre for Learning and Teaching (Skylight) website at the University of British Columbia: http://www.skylight.science.ubc.ca/node/473

25. Respond to the mid-term feedback!

26. Give out a one-minute paper or other brief feedback form more often. Classroom Assessment Techniques by Angelo and Cross describes this and many other wonderful techniques: http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidesbk/teachtip/assess-1.htm

27. “I’m just wondering...” Find a way to allow your students to ponder, pose, ask, and discuss, by allowing for this very open-ended inquiry from time to time – this could be written on a piece of paper with no name, or done in small groups and reported back, or done using the snowball technique described above.

28. Ask your students to “be a statue.” It takes 30 seconds and can be done ‘on the fly,’ when interest seems to be waning. This was as far as we got in the STLHE session, and in my view was a really nice way to end. Some examples were “thinker,” “thank you for these gifts,” or “I am receptive to these ideas,” “with both arms extended,” smiling, both hands up (in happiness? or having ‘seen the light?’).

29. Talk with your colleagues about teaching and learning. This is becoming more common, and can be very helpful to glean tips, to know you are not alone, to receive input on how you are thinking of responding to a particular situation, or?

Assessing Student Learning

30. Divide big assignments worth many marks into smaller chunks worth fewer marks each. I have done this for many years in a group project in ecology. Some of the chunks include things like a proposal, update, research paper, and brochure. The percentage of marks has ranged as low as 3% and as high as 35% for each chunk. What I like, and I think my students do too, is that they cannot “blow it” on one big overall project assignment and they receive feedback all the way through, which encourages them to do better and learn throughout the course.

31. Offer flexible assignments where students can choose from a variety. This is something I have been recently experimenting with, and my students really like it.

32. Think about group vs. individual marks. Can you let them choose, even if the work is done in a group? Maybe give them a range and let them choose the specifics; they will appreciate it.

33. Join a team: Team-Based Learning (TBL), that is. I have seen this specific approach used in disciplines as diverse as poetry and engineering; see http://www.ou.edu/pii/teamlearning/listserv.htm

34. Invite students to provide some test questions. You can give them a small mark for this, or not. You will want to use or adapt some of them, but can augment with your own to round out the test.

35. Consider use of a learning portfolio – the students’ version of a teaching portfolio. Learning portfolios are an excellent way to invite students to show how they met the course objectives, to tie it all together, and to do so in a creative way.

36. Show connections using concept maps. You can use these visual tools to teach, or ask your students to show their learning, and these can be assessed. My colleagues and I have led seminars on this subject and wrote this article, which has references at the end related to assessing concept maps; see http://www.tag.ubc.ca/resources/tapestry/archive/01/mapping.htm

37. Give credit for helping others. Are there one or
more ways in your course where you can give students a few marks for contributing to another student’s assignment? It is a great way to encourage reciprocal support and show how it can be valued and valuable.

38. Just ask, at any point in your lesson: “What is a related thought, idea, caveat, suggestion or question?” It is a great way to change the pace and turn things back to the students.

Ongoing Professional Development and Scholarship

39. Share your successes and challenges with a colleague.

40. Pass it on... This is an activity that can work very well in a large lecture room with fixed seats. Ask each student to take out a half-sheet of paper that they can pass around the room. Ask them to note something that relates to what you have been doing in your class or lecture; let them know that whatever they write will be shared. It can be something that they do, think, or believe, or it can be a fact from the lecture or textbook. Give them five minutes, then ask them to fold it in half, and pass it along X number of spaces (enough that it is not obvious who wrote what). They then open it, and either add a comment, a question, or edit it (depends on what you asked them to do). You can vary the number of passes, depending on time; in the end, it has to come back to the person who wrote it. You can then either move on, or ask people to say what they got out of the edits. It has a nice component of quiet writing and reflection, but is also very active, and can link to small group or whole class discussions.

41. Attend a teaching and learning seminar. There is always something new to learn.

42. Read and apply Seven Principles for Good Practice in Undergraduate Education, by Chickering and Gamson (1987). See Point 21 for a related idea and the web link.

43. Use google scholar or databases to find published literature related to your teaching techniques.

44. Ask a question about student learning and conduct research on it – the scholarship of teaching and learning is gaining momentum and is an excellent way to connect teaching, learning, and research. See our Institute for the Scholarship of Teaching and Learning (ISoTL) at UBC: http://tag.ubc.ca/about/institute/ISoTL.php

45. Inquire! Model this approach with your students. For example, I might show them some data, or other findings from a study then ask them to pose “a question I have asked or could ask” that relates.

46. Write an article. There is a growing number of hard-copy and electronic peer-reviewed journals that focus on teaching and learning and that invite articles in a variety of forms. For example, Transformative Dialogues includes reflections, articles and essays.


48. Joint a listserv that is general to teaching and learning, or more specific to a particular technique. Some examples: STLHE: http://www.mcmaster.ca/stlhe/; Educational Developers Caucus (EDC): http://www.mcmaster.ca/stlhe/edc.html; and the International Society for the Scholarship of Teaching and Learning (ISSOTL): http://www.issotl.org/

49. When at a conference, make notes that you can use to enhance your own practice; in fact, why not organize all your notes this way?

50. ‘Think of a time’ when your students were learning optimally; how did you help them? How can you have this take place more often? I hope that 1, 5, or all 50 of the ideas in the list will inspire you.
Concluding Note

More contributions are welcome; email <alicecas@telus.net>. I will add as many as you send, and hope to create a wiki or blog soon. I also welcome you to include your contact information so that future explorers can contact you to start conversations. I would appreciate it if you could ask my permission to use this document in full or in part in professional development sessions you lead; I am keen to track all the ways it is being used (the list is growing!).

Biography

Alice Cassidy is the Associate Director in the Centre for Teaching and Academic Growth at the University of British Columbia (UBC). She has taught biology courses at UBC for 15 years and leads educational development workshops in the community. Her areas of focus include active and participatory learning, use of real-world problems and cases, narrative and visual tools in teaching and learning, and involving students as active collaborators in the scholarship of teaching and learning.
What do Professors Want to Learn to Improve Their Teaching?

Jennifer A. Mather
University of Lethbridge

This paper recounts the author’s experience with giving a Needs Assessment for improvement by university teachers. Subjects were from the University of Lethbridge and the 2008 Society for Teaching and Learning in Higher Education (STLHE) conference session. Teachers at the University (n=77) indicated they could spend 5-15 hours in teaching development per semester and wanted a variety of information access but favoured quick one-hour workshops. STLHE participants (n=34) were willing to attend three-hour workshops and spend more time per semester (over 20 hours) improving their teaching. Topics that both groups wanted to hear about were teaching efficiently, using student feedback, fostering critical thinking, and marking fairly. STLHE participants were more interested in fostering group work, student writing, and dealing with student disabilities and diversity, whereas the University sample cared more about preventing cheating and presenting the results of their teaching for promotion and tenure. All in all, there were many things that teachers wanted to learn.

Introduction

Why would I do a Needs Assessment to evaluate what faculty at the University of Lethbridge wanted to learn to assist them in their teaching? I had joined the newly-minted Center for Advancement of Excellence in Teaching and Learning (CAETL) as a part-time Teaching Fellow. During the beginning of my term, the Center was evaluating what seminars, programs, and information should be offered to our faculty. In theory, teachers could just read up on how to teach well, and books such as McKeachie’s (1986) Teaching Tips (my copy is the 8th edition) and the STLHE Green Guides have put this kind of instructional assistance at everyone’s fingertips. Gaining skills is not just about acquiring knowledge, as people learn better with affective input and an exchange of information. As well, some new areas such as technology (Ganske & Hamamoto, 1984) and problem-based learning (Murray & Savin-Baden, 2000) need expert instruction for their use. Professors are, despite the fact that researchers tend to be introverts
(Rushton, Murray, & Paunonen, 1983), members of a social species and learn better around others.

General discussion produced casual information about what people wanted but no systematic evidence of their concerns. To fill this gap, I produced a Needs Assessment that would give the CAETL some guidance. The areas covered in the questionnaire were demographics, time faculty would devote to teaching improvement and possible scheduling, and topic areas that fell within course construction/management, evaluation strategies, technology, and other (see Appendix). In late November, the questionnaire was sent to faculty members through the web to ensure privacy, though those who felt they could give a seminar could enclose their e-mail address. The results were used to help plan our Teaching Appreciation Day in June and for a poster at the June meeting of the STLHE, where I decided to combine the STLHE conference presentation with data gathering. The poster presented the results of the survey, and people who came were requested to fill out a copy of the form, simply printed from the web. This allowed me to compare the responses of STLHE members with those of ‘ordinary’ university teachers.

University of Lethbridge Teachers

How did faculty want to learn about teaching? Out of a faculty number of around 450, 77 University of Lethbridge teachers answered. Many were junior (62% with less than ten years of experience), and reflected the general belief (Schoenfeld & Magnan, 1992) that teaching improvement was something that professors were concerned with early in their career. Even those who answered the questions were only willing to devote a modicum of time to teaching improvement – 55% said between five and 15 hours per semester. University professors lead busy lives and are aware that the major lens through which their success is viewed is research, not teaching (Schoenfeld & Magnan, 1992). When asked what time span these instructions should take, 59% suggested one hour ‘sound bites’ and only 14% were willing to last through three hours of instruction; very few would spend a whole day improving their teaching. The form of assistance or instruction that they wanted was variable (they could have multiple choices so the numbers did not sum to 100%), with 71% wanting web access, 54% guest lectures, 53% discussion of teaching issues, 51% attending seminars on teaching methodology, and 52% interested in teaching mentorships. Clearly a Teaching Development office that wished to assist them would have multiple opportunities.

So what did they want to learn about? When provided with a long list of 24 possible topics under general areas of class management, assessment, technology, and other, the respondents made some clear choices. Teaching efficiently was ranked highly; a survey of University of Lethbridge teachers showed they work over 50 hours a week and this reflects the general overwork of faculty as measured by Jacobs and Winslow (2004). Marking well and fairly and using student feedback productively also topped the list (see Table 1). Specialty areas such as long distance teaching and running a good lab were lowest, along with methodological instruction in areas such as doing away with exams and fostering online discussion for students. None of the five technology titles made the top 10; despite what we hear in the media (see Young, 2004), technology did not equate with good teaching for respondents.

STLHE Participants

Presenting the information as a poster at the 2008 STLHE conference resulted in a mix of discussion and gathering information from questionnaires. Many poster visitors were willing to complete a paper copy of the questionnaire, but paper is not the same as the web and the second set of responses was foiled for many by the necessity to turn pages to complete the questionnaire. Nevertheless, 34 STLHE participants completed the first set of questions, and 19 the topic preferences. The STLHE participants were considerably more experienced than the University sample, as 50% had more than 20 years of teaching experience. They did not believe that there was a plateau for learning about teaching and they were committed to continuing to learn.
How did they compare with the first sample on commitment to learning? They were willing to put in much more time to do this, with 44% indicating they would spend over 20 hours per semester. A larger proportion would attend longer sessions; 59% wanted one hour and 47% would sit through three-hour presentations, though few wanted full-day presentations. Their choice of communication methodologies was similar except that only 29% wanted web site information and 24% the newsletter. Perhaps because they were older, they were less tuned to technology. Hands-on guest lectures (47%), discussions (65%), methodology seminars (53%), and mentoring (56%) all suited them.

What were their favourite topics? There were similarities and differences with the first group. The STLHE sample rated critical thinking most important (it was only sixth for ‘regular’ faculty). Perhaps being just as rushed, they put teaching efficiently second (see Table 1). They were not particularly interested in student cheating, ranking it as 20th. However, they also gave the same third place ranking for using student feedback. They were interested in group work, rated a low 16th by regular teachers, and rated online discussion fairly high at seventh.

### Conclusion

What can teaching developers learn from this? First, faculty want to learn about a wide variety of topics including non-standard areas such as making a teaching dossier, learning to use PowerPoint, dealing with diverse students, and using student feedback well – all seen as part of the teaching process. In planning a set of presentations for teachers, a teaching development

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**Table 1**

*Comparison of Rankings of the Top 10 Topics on Teaching Improvement*

<table>
<thead>
<tr>
<th>Topic</th>
<th>University of Lethbridge</th>
<th>STLHE Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marking well and fairly</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Teaching efficiency</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Using student feedback</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Preventing cheating</td>
<td>4</td>
<td>(20)</td>
</tr>
<tr>
<td>Presenting your teaching for tenure and promotion</td>
<td>5</td>
<td>(22)</td>
</tr>
<tr>
<td>Encouraging critical thinking</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Making a teaching dossier</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Encouraging student writing</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Teaching large classes well</td>
<td>9</td>
<td>(20)</td>
</tr>
<tr>
<td>Encouraging class participation</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Fostering group work</td>
<td>(16)</td>
<td>3</td>
</tr>
<tr>
<td>Dealing with diversity</td>
<td>(20)</td>
<td>5</td>
</tr>
<tr>
<td>Managing online discussion</td>
<td>(21)</td>
<td>7</td>
</tr>
</tbody>
</table>

*When the other group ranked a topic lower than the top 10, it is included in brackets.*
office could pick up on the favourites, or conduct a similar survey at its institution. Second, there's no consensus about how to learn these things; like our students, we have many different learning styles, and leaders must use all of them to communicate with teachers. Third, faculty do not have much time to devote to learning about teaching. Given the pressure of modern academic life (Jacobs & Winslow, 2004), teachers will only attend a few and short seminars or workshops. It's certainly a challenge for any teaching development office, but one well worth undertaking. There is a world of learning out there, for us as well as our students.

Acknowledgements:

This research was carried on while the author was a Teaching Fellow in the Center for the Advancement of Excellence in Teaching and Learning, and she would like to thank Brad Reamsbottom for his assistance in construction of the questionnaire.

References


Biography

Jennifer A. Mather is a Professor in the Department of Psychology at the University of Lethbridge, Alberta. Her research interests are in the behaviour of octopuses, and in fostering excellent teaching. She recently completed a one-year part-time teaching fellowship in the University’s Center for Advancement of Excellence in Teaching and Learning.
Appendix
Teaching Development for Faculty

The Center for the Advancement of Excellence in Teaching and Learning is planning what activities and areas of information would be helpful to the improvement of teaching by faculty. Please fill out the following questionnaire so that we can learn what areas, times and amounts of information would be suitable for you.

Faculty: A & S _____ Mgmt _____ Fine Arts _____ Education _____ Nursing _____
Years of Teaching: 0-4 _____ 5-9 _____ 10-14 _____ 15-19 _____ 20+ _____
Title: Professor _____ Assoc. Prof _____ Ass’t Prof _____ Acad. Ass’t _____
Lecturer _____ Sessional _____

How many hours per semester could you devote to teaching improvement?
0-4 _____ 5-9 _____ 10-14 _____ 15-19 _____ > 20 _____

What kind of activities would assist you with your teaching?
Guest lectures _____ Discussion groups _____ Methodology seminars _____
Web site access to information _____ Teaching mentorship _____ Newsletter tips _____

What kind of scheduling would suit you best?
One-hour presentations _____ 3-hour workshops _____ Full-day focused workshops _____
Unscheduled web-based discussion _____ Untimed information access _____
Pairing determined by mentoring partners _____
What do Professors Want to Learn to Improve Their Teaching?

If face-to-face is suitable for you, what times would be best for you?

Weekday noon hour ______ Weekday late afternoons ______ Saturday mornings ______

Would you prefer teaching assistance to be: Focused information ______ Informal support ______

What topic areas would you like to see covered?

Course construction/management:
Making good course outlines
Fostering and evaluating class participation
Teaching large classes well
Encouraging development of writing skills
Facilitating group work
Fostering critical thinking
Developing oral presentation skills
Running a good lab
Managing cultural diversity and disability issues
Handling unreasonable students and grade appeals

Evaluation strategies
Writing good multiple choice questions
Doing away with exams
Making Web CT tests
Marking quickly, fairly & effectively

Cheating: avoiding it and dealing with it

Technology:

Making a good Power Point presentation

Handling multiple technologies in the big classroom

Classroom management with Web CT

Setting up online discussion groups

Doing distance courses

Other:

Making a Teaching Dossier

Presenting your teaching to the STP Committee

Doing teaching research

Using student feedback effectively

Teaching efficiently
Democracy Across the Disciplines:
Design Your Course for Democracy

Janice Newton
York University

If a liberal arts education should prepare our students to participate in a meaningful way in democracy, what does that mean for how we design our courses across disciplines? In this paper, I first address the question: who should teach democratic skills? Using an upper-level course in Canadian politics, I then illustrate how to explicitly integrate democratic skills and attitudes into course design through learning objectives, classroom activities, assignments, and grading techniques. Finally, I argue that these practices can and should be adapted to other disciplines.

Democratic Skills: Who Should Teach Them?

Students often focus on their employment prospects upon graduation, but higher education also plays an important role in socializing students to democratic skills and values that allow them to participate fully as citizens upon graduation. Disciplinary structures obscure the crucial role we all play in educating our students for these larger goals. A disciplinary focus may lead faculty members to eschew the teaching of writing skills, assuming that it is someone else’s job, perhaps an English professor. Not all students take English classes, not all English professors agree that teaching writing skills is their task, and not all students learn writing skills from one or two English courses. Professors demand writing proficiency in most disciplines, and prospective employers require writing skills of graduates they hire.

Democratic skills, like writing skills, are general skills that students should master upon graduation. While high school offers some preparation, students continue learning these skills throughout the undergraduate years (Gutmann, 1999). Whether the discipline is dance or geography, undergraduates need to learn a range of democratic skills: how to interact with civility, how to stay informed about crucial issues that shape their discipline and world, how to deliberate with those who differ, and how to collaborate with others. They have to learn how to listen across cultures and to develop consensus on contentious issues. As the citizens and leaders
of tomorrow, who takes responsibility for meeting this challenge? Rather than leaving this task to some other class or discipline, all faculty members must take responsibility for fostering democratic skills. The discussion below illustrates how I designed an upper-level course in Canadian politics to help students master democratic learning objectives. Though this case example is a politics course, I will note how to adapt selected activities to other disciplines.

Case Example: Overview of a Capstone Course in Canadian Democracy

I designed a fourth-year capstone course, Canadian Democracy, to integrate the learning of democratic skills.

I divide a class of 25 into small groups of four to six students. Initially, a representative from a non-profit non-governmental organization introduces their organization to the class. Each group drafts an advocacy proposal for an organization; each organization provides feedback on the draft. Over the course, groups develop research, policy analysis, and an advocacy strategy for their organization. Finally, groups present their projects to the representatives who evaluate its usefulness. Most group work is online or presented in class, making this assignment possible for classes of up to 50 students.

The organization (10%) and group members (10%) assess the advocacy project. Each group submits a policy analysis paper, and the group chooses either individual or group assessment (20%). The instructor evaluates a final portfolio (40%) and the democratic citizenship and professionalism grade (20%).

I developed learning objectives for the course using the Ontario Council of Vice-President’s guidelines (OCAV, 2005). Below I discuss specific democratic learning objectives and illustrate how I have integrated each learning objective into course design, teaching practices, assignments, and assessments.

Democratic citizenship skills are embedded in this group assignment. As students develop an advocacy strategy for their organization, they experience the challenges and possibilities of making democratic change in collaboration with others. Other disciplines could adopt this by selecting projects appropriate to their discipline.

Autonomy and professional capacity:
Democratic citizenship and professionalism

Because our capstone courses are supposed to help students connect their undergraduate studies to career and citizenship, I jettison participation grades in favour of a democratic citizenship and professionalism grade. During the first class, students discuss the citizenship and professional skills that they think they might need in the future, and how these are revealed in class behaviour, including: attendance, preparation, timeliness and organization, presentation of work, and class discussions. We confront unprofessionalism every day in our classes: lateness in attendance and assignments, failure to consult in a crisis, failure to consult course materials before asking questions, or failure to do required reading.

Democratic citizenship draws attention to a different set of classroom skills: respect for others, soliciting contending viewpoints, listening to others, or attending to views with which one may disagree. I ask the class to identify problematic situations and to propose appropriate remedies; I request examples of students disrespecting others or impeding others’ learning. As we generate a list of negative behaviours, the class develops a shared commitment to reject such behaviour and act respectfully towards each other in tone, language, and demeanour, both online and in class. I use this method in a variety of contexts, and invariably, students generate the skills I want addressed. This list becomes the basis for developing a rubric for democratic citizenship.

Articulating professional and democratic skills is not enough. How can we teach students to use them regularly (Richhart, 2002)? To reinforce, I

1 The author credits Elizabeth Wells (2007, June) for the idea of a professionalism grade.
require readings on democratic skills. I also call attention to appropriate behaviour in class discussions throughout the course: ‘thank you, Susan, for connecting Ken’s point to our prior discussion.’ I keep detailed notes and distribute a one-page check sheet based on the rubrics so students can track their own performance. About one-third of the way through the course, I ask students to evaluate their own performance, based on the rubric. We meet to compare notes and discuss any glaring discrepancies or areas that need work. This formative evaluation is especially useful in providing feedback on group interactions I have observed in class. Similar reinforcement of democratic skills and self-evaluation is even possible in a large lecture.

Communication skills: Democratic listening skills

Democratic listening deserves to be singled out as a learning objective in its own right. Peter Elbow (1986) argues that students need to develop believing as well as critical skills if they wish to develop their creative capacity. While we often emphasize teaching critical skills, we seldom emphasize teaching believing skills. I would also argue that both believing and critical skills are crucial to a democratically functioning citizen. Critical skills allow us to attack another’s argument, show where their evidence is weak, where they are inconsistent, etc. This is a zero sum game. Someone is right; someone is wrong. Believing skills allow us to hear and understand viewpoints different from our own, not so that we can critique them, but so that we can better understand how others see the world. Believing skills take us beyond mere ‘tolerance’ of difference and allow us to understand a perspective dissonant from our own. ‘How can I see this the way you see it?’ would be the lead question. Believing skills are essential for a democracy that values cooperation and collaboration over conflict.

I embed democratic listening skills into the course in several places. In the first class, I pose problematic scenarios related to democratic listening: students who talk a lot but do not listen to other students; students who do not participate at all or very little; or students who speak only to criticize. Upon reflection, students can usually generate ideas about alternative democratic behaviour that focuses on paying attention to others’ ideas, being able to summarize and expand on others’ ideas, and listening to others’ ideas to understand a viewpoint that is different from their own. I also ask them how important this skill is in a democracy.

This discussion shifts attention from how often they participate to the quality of their participation, including the quality of their listening. Subsequent class discussions explicitly highlight the practice of these democratic listening skills. In addition, I routinely use discussion techniques that support learning these democratic listening skills, including the leaderless discussion (Ritchhart, 2002), and the believing game (Elbow 1986), which could be used in any disciplinary context.

Students also practice in small reading and writing assignments, and submit their work online, in advance of class, and respond to the work of at least two classmates. I give specific instructions for feedback, emphasizing believing skills and constructive critical feedback. For example, in the first assignment, students submit a political self-portrait that responds to questions such as: what has drawn you into political science? What political issues do you care about? Which courses did you learn the most from and why? Have significant life experiences influenced your approach to politics? Students respond to classmates’ entries by identifying similarities in their experiences and reflecting on what they might have in common. They also comment on another student’s work that differs significantly from their own. How has this changed the way they see the discipline? What have they learned from this fellow student? These exercises could readily be adapted to any discipline.

Another assignment asks students to compile a democratic profile of their current representatives,
federal, provincial, and municipal. They post a draft of a letter to one of their representatives on an issue that they care about to the course website, and solicit feedback from fellow students on the letter’s effectiveness, noting ways to improve it. Both exercises require students to see issues from another’s perspective. In other disciplines, an analogously authentic exercise would provide a similar opportunity for students to practice listening.

I evaluate these democratic listening skills in several places in the course. The democratic citizenship and professionalism rubric focuses on a specific range of behaviours: do you ignore others’ ideas or pay attention and respond to them? Do you listen only long enough to tell someone why they are wrong or do you listen to others who disagree with you and try to understand how the issue makes sense from their perspective? Do you disrespect others in tone, language, or demeanour, or is your tone, language, and demeanour respectful? The final portfolio in the course asks students to compile evidence from course assignments to demonstrate that they have met each of the course’s learning objectives, and to write a reflection piece that talks about democratic citizenship and professionalism skills they have learned in the course.

Conclusion

Although my example is a political science course, these ideas could potentially be adapted for courses in many other disciplines. Class discussions in any discipline would benefit from having students interact with respect, listen to each other, and understand perspectives different from their own. We all share responsibility to prepare students for life after graduation as employees and citizens. It is too important for our democracy to leave this task to someone else.

References


Biography

Janice Newton, Associate Professor of Political Science and Women’s Studies at York University, was awarded a 3M National Teaching Fellowship in 2005, and has presented teaching workshops in Canada and the United States. Her publications include Feminist Challenge to the Early Canadian Left (McGill Queens 1995), Voices from the Classroom: Reflections on Teaching and Learning in Higher Education (Garamond 2001), and articles on preventing plagiarism, classroom assessment, feminist pedagogy and women in the Canadian left. In addition to her research on democratic listening, Dr. Newton is also doing a history of representation in the Canadian Political Science Association.
Le courant du Scholarship of Teaching and Learning (SoTL, Boyer 1990, Kreber 2002) influence nos formations continues pour formateurs d’adultes et pour enseignants du primaire, du secondaire et du supérieur : nous les organisons dorénavant de façon à susciter un réel développement professionnel par la pratique réflexive, la recherche en classe et une systématique communication sur les avancées des enseignants. Pour outiller ces formations, autant la littérature est abondante et les intentions largement partagées, autant les exemples concrets d’activités ne font pas légion.

Dans cet article, nous proposons de relater une expérience réflexive menée par des enseignants du secondaire à partir de traces d’apprentissage laissées par leurs élèves dans une plateforme d’enseignement en ligne destinée à soutenir le développement des compétences « lire » et « écrire » en français. Nous espérons ainsi cet exemple d’activités donnera aux accompagnateurs du post-secondaire des idées de transfert vers leur propre pratique. Nous espérons encore humblement contribuer au décloisonnement des approches et pratiques pédagogiques trop souvent spécialisées en fonction de leur public. Mutualiser les bonnes pratiques en matière de formation et d’accompagnement de nos enseignants et formateurs devrait nous permettre de les enrichir et d’améliorer continuellement la qualité des apprentissages « tout au long de la vie ».

Cet article comporte trois parties. Dans la première, nous décrivons le contexte dans lequel s’entracine notre expérience de formation continue des enseignants. Nous y présentons l’outil eCoe du point de vue de l’élève. Dans la seconde, nous nous attachons à décrire le dispositif d’accompagnement des enseignants. Nous y abordons les modalités de recherches que nous projetons de mettre en œuvre dans les mois à venir pour observer le parcours de professionnalisation des enseignants. Dans la troisième, nous relatons notre première expérience d’analyse de traces avec huit enseignants.

**Le projet eCoe, côté apprenant**

Le projet eCoe a pour objectif de soutenir le développement des socles de compétences visés dans l’enseignement primaire et secondaire de la communauté française de Belgique. Il propose une plateforme en ligne reprenant par compétence des tâches susceptibles de les servir (http://www.e-cole.be). Plus de 250 tâches y sont jusqu’ici répertoriées.

La plateforme présente une carte de navigation (type GPS) dans laquelle sont affichées sous forme de rond-point les compétences, leurs composantes et leurs ressources. Via chaque rond-point, l’apprenant accède à une série d’activités complexes, semi-complexes et simples. Pour chaque tâche,
l’élève peut consulter une fiche descriptive à partir de laquelle il peut évaluer et commenter l’activité. Le rond-point donne également accès à un dossier de suivi dans lequel sont reprises les activités qui ont été consultées. À partir de ces informations, l’élève est invité à rendre compte à son enseignant de sa perception de son niveau de maîtrise de la compétence travaillée et à en apporter la preuve. Un débat peut dès lors s’installer entre l’élève et son enseignant. Si la preuve est à charge du premier, l’apport d’informations diagnostiques et formatives revient au second.

Le projet eCole, côté enseignant


Pour soutenir le développement de ces compétences, nous avons mis sur pied une formation de trois journées. La première est consacrée à la construction, par chaque enseignant, d’un scénario d’exploitation de l’outil dans sa propre classe.

**Figure 1**

eCole: un parcours individualisé; une cartographie des compétences; un espace de dialogues et d’évaluations.
À cette occasion, nous expliquons également aux enseignants les principes qui ont présidé à la conception de cet outil. La seconde est centrée sur la régulation de ces scénarios à partir de l’analyse des traces d’apprentissage des élèves. La troisième est axée sur la récolte de données susceptibles de nourrir l’évaluation qualitative du projet. Ces trois journées sont sciemment distancées entre elles de deux mois pour permettre à l’enseignant d’exploiter l’outil en classe et d’en réguler l’utilisation.

Nous avons conçu cette formation sur base d’éléments que nous jugeons susceptibles d’avoir un impact sur le développement professionnel des enseignants. Toutefois, il ne s’agit que d’une hypothèse. Dans les mois à venir, nous nous attachurons à rassembler les données utiles à sa vérification. Nous observerons notamment l’usage qu’ont les enseignants des ressources mises à leur disposition. Nous étudierons leur parcours de développement, ce qui les accroche, ce qui les convainc. Nous tenterons d’identifier ce qui les fait changer, passer d’un palier de développement de professionnalisation à l’autre. Nous nous attelerons à circonscrire les événements critiques qui interviendraient dans leur professionnalisation. Nous porterons également attention aux effets visibles de ce développement, notamment en matière de régulation des scénarios conçus pour exploiter eCole avec leurs élèves. Notre objectif est de documenter leurs parcours de professionnalisation et d’y identifier ce qui en maximise le développement.

Le projet eCole, amorce du SOTL

Nous n’avons pas encore eu l’occasion d’expérimenter comme tel le système de formation présenté ci-dessus. Par contre, une action de formation a été menée en janvier et février 2008, qui comprenait deux jours de formation espacés d’un mois. Huit enseignants (un informaticien, sept romanistes) et 267 élèves répartis dans douze classes y ont pris part.

La formation avait pour objectif de donner aux enseignants l’opportunité de concevoir, de partager et d’expérimenter des activités complexes diffusables sur la plateforme eCole. La première journée a été consacrée à la présentation de cette plateforme et la manipulation technique d’outils utiles à la publication d’activités.

La matinée de la seconde journée a été riche en matière d’approfondissement et de mise en œuvre de concepts. La présentation mutuelle des activités a été l’occasion non seulement de découvrir leur conception de la compétence, des méthodes pour la développer et l’évaluer, mais aussi de les ouvrir à d’autres acceptions. Les résistances dépassées, les enseignants ont accepté de s’approprier de nouveaux outils pour analyser et réguler leurs activités.

L’après-midi a été essentiellement réflexive. L’analyse des traces a été précédée par une présentation du scénario mis en place par les enseignants pour exploiter l’outil eCole en classe. Contre toute attente, les enseignants de français avaient confié à leur collègue d’informatique l’exploitation de l’outil. Ce dernier y avait consacré deux séances de cours et proposé à toutes les classes le même parcours d’apprentissage constitué de six activités. Force est de constater que nous étions loin d’une pratique individualisée et autonomisante susceptible de soutenir le développement de compétences.

L’analyse des traces a porté sur les durées de connexions, les types d’actions, le nombre d’activités réalisées et les trajectoires d’apprentissage. Il n’est pas une donnée qui a laissé les enseignants indifférents. À la vue du graphique reprenant par classe la durée moyenne de connexion, les enseignants ont essayé de comprendre pourquoi cette durée variait de 19 à 51 minutes selon les élèves. Parmi les hypothèses, ils ont évoqué le moment de connexion, le niveau de la classe ou encore l’implication de l’enseignant dans ce projet. Le graphique consacré aux types d’actions reprend le nombre de clics pour les tâches d’organisation (connexion, consultation de la carte de compétences, consultation des activités), de progression (accès aux activités) et de réflexivité (message dans lequel l’élève apporte les preuves de sa maîtrise des ressources ou des compétences travaillées). Les clics organisationnels y sont de loin supérieurs aux clics de progression. Un tel graphique laisse entendre que les enfants ont passé plus de temps à naviguer dans l’outil qu’à réaliser les activités. Surpris par ces données, l’enseignant a proposé de prendre en considération la durée passée sur ces différentes actions et non le nombre de clics.
Les résultats se sont inversés. Les enfants ont passé en moyenne 70,7 % de leur temps sur les activités et uniquement 29,3% sur les tâches organisationnelles. Le graphique consacré aux trajectoires d’apprentissage reprend pour chaque élève la succession des types d’action ainsi que la durée de chacune d’entre elles. Les enseignants ont tenté de comprendre pourquoi un élève avait passé près de cinq minutes à se connecter alors que ses condisciples avaient mis moins d’une minute. Le professeur d’informatique s’est alors souvenu que l’élève en question s’était interrompu pour aider son voisin qui éprouvait des difficultés à entrer dans le dispositif.

Lors de cette séance, les enseignants ont fait preuve d’une réelle attitude de praticiens réflexifs et de chercheurs. C’est pour accompagner cette attitude de recherche que nous avons prévu de décliner en trois jours ce module de formation.

Discussion et perspectives

Bien que les activités aient été conçues selon les principes du SoTL, force est de constater que les enseignants accompagnés en 2008 n’ont pas investi durablement cette dynamique. Quantité de facteurs explicatifs pourraient être avancés en commençant par le fait que leur participation était davantage mue par l’obligation que par leur envie de se professionnaliser. L’accompagnement pédagogique se limitait en effet aux deux journées de formation imposées par le ministère. Nous ne pouvons non plus ignorer le frein que représente l’usage des technologies. Malgré toutes ces limites, nous réalisons qu’au cours des deux jours de formation, ces enseignants se sont pris au jeu du SoTL. Ils ont partagé leurs productions. Malgré certaines résistances, ils ont accepté d’approfondir leur connaissance. Ils en ont fait usage pour réguler leurs activités au profit de la qualité de l’apprentissage de leurs élèves. Ils ont spontanément endossé le costume de chercheur. Ils se sont laissé interpeller par les traces, ont émis une série d’hypothèses interprétatives et ont tenté de rassembler au fur et à mesure les données utiles pour les vérifier. Certes, aucune hypothèse n’a pu formellement être confirmée, mais ce que nous soulignons ici, c’est la démarche des enseignants qui tentent d’interpréter les traces laissées par leurs élèves pour réguler leur pratique. Dans ce travail de questionnement, ils ont mobilisé et combiné quantité de ressources inhérentes à leur professionnalisation.

La mise en œuvre de la dynamique SoTL est un travail de longue haleine qui est fonction non seulement de l’institution, du temps, des conditions matérielles et humaines, mais aussi et surtout de l’aptitude de l’enseignant à entrer dans une démarche réflexive ouverte sur l’apprentissage et le partage. Il convient de créer au plus tôt les conditions du développement de cette aptitude. L’approche déployée dans eCole, soutenue par cette formation de trois jours autour de la conception de scénarios et de l’analyse des traces de ses propres élèves, pourrait y contribuer. Autrement dit, eCole est pour nous l’occasion d’un double accompagnement : celui des enfants dans le développement de compétences inhérentes à un apprentissage autonome et celui des enseignants dans le développement de compétences inhérentes à leur professionnalisation.

Références


Biographies

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Marianne Poumay est professeure à l’université de Liège et directrice du LabSET-ULg. Cette équipe de 35 personnes étudie l’apprentissage, en particulier dans un contexte d’usage de technologies. Marianne est à l’initiative du master complémentaire Formasup, qu’elle s’attache à faire évoluer au fil des ans, tel un laboratoire de principes et méthodes d’accompagnement des enseignants dans leur professionnalisation.
Dealing with Wicked Global Problems: 
An Inter-Disciplinary Approach

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The world faces a number of complex challenges that are sometimes referred to as ‘wicked problems.’ Universiﬁes have been relatively poor at preparing graduates for such challenges, yet it will be the future professionals who need to tackle the problems. This essay looks at two related projects that have attempted to advance the skills training of graduates for a complex world, in the context of educating engineers and scientists in sustainable development.

A Delphi study conducted in the UK suggested that systemic, student-centred approaches were vital to the appropriate development of undergraduates to become engineers with skills in sustainable development. A pilot project sponsored by the UK Royal Academy of Engineering developed an inter-disciplinary course unit, using student-centred principles, to embed the principles of sustainable development, in its broadest sense, in the curricula of engineers and scientists. The essay includes an evaluation of this approach.

Introduction

Global warming has begun to feature strongly in everyday life, but it is by no means the only ‘wicked’ global problem. The oft-cited Brundtland Report (1987) identiﬁes a number of such issues, including:

- the burden of debt in the developing world, inequitable commercial regulations, and a growing number of the world’s population living at or below subsistence level;
- overuse of non-renewable resources, growing competition for limited water supplies, and threats of armed conﬂict over access to water;
- reduction of biodiversity and continuing desertiﬁcation;
- pollution of air, water, and soil, affecting the
global environment and climate change;
• continuing growth of the world’s population, coupled with additional economic pressures caused by increased life expectancy; and
• increasing nationalistic, political and religious extremism, terrorism, armed conflict, mass migration and social disruption.

To some, these are problems of global societal responsibility, and to others, problems of sustainability: concepts of sustainable development and global citizenship overlap, which represents many of the complex challenges that the world faces.

We sometimes refer to these issues as ‘wicked,’ in the sense introduced by Rittel and Webber (1973), whose view of a wicked problem was that it featured many of the aspects of:

• having no definitive formulation;
• having no clear end, no stopping rule;
• having a solution that is ‘good or bad’ rather than right or wrong;
• having no immediate or ultimate test of its resolution;
• having consequences to every solution – there is no possibility of learning by trial and error;
• not having a well-described set of potential solutions;
• being essentially unique;
• being a symptom of another problem;
• having causes with no unique explanation; and
• bringing expectations that its ‘owner’ will find the ‘right’ answer.

Although not all of these have to be present for a problem to be ‘wicked,’ it is equally clear that many of the issues that we are describing will align with these determinants. Tackling such issues requires a different outlook, and universities have a role in shaping future graduates to face such global challenges.

This essay reflects on the implementation of a project, with financial assistance from the UK Royal Academy of Engineering, to embed some of these approaches in the curriculum and develop in students the skills necessary for operating in a complex ‘wicked’ world. To this is added the results of a Delphi consultation (which involves a series of structured conversations between leading experts with the aim of reaching a group consensus – see Delbecq, Van de Ven, and Gustafson (1975) for a description of this approach to garnering expert opinion), supported by the Higher Education Academy’s Engineering Subject Centre, designed to elucidate best practices in this area.

Problem-Based and Inter-Disciplinary

The full story of the philosophy and origins of the pilot module are chronicled elsewhere (e.g. Engel & Tomkinson, 2006; Tomkinson, Engel, Tomkinson, & Dobson, 2007; Tomkinson, 2008; Tomkinson, Tomkinson, Dobson, & Engel, 2008). Two key points to bring out here are the inter-disciplinary nature of the module and its reliance on problem-based learning.

A brief look at the Brundtland list (above) will exemplify what is involved in trying to tackle issues on a uni-disciplinary basis, yet we often find that disciplines try to ‘own’ sustainable development or global citizenship. In Manchester, the concept of an inter-disciplinary approach to wicked global problems goes back to ideas of Charles Engel (2002) directed towards the remediation of complex problems of societal responsibility. The University of Manchester embraced some of these ideas, carrying out development activities with staff and students, but it took the support of the UK Royal Academy of Engineering, following a report on the education of future engineers (Engineering Council, 2004), to prime a pilot module for scientists and engineers.

Ideas about the necessity of an inter-disciplinary approach in resolving complex issues of sustainable development were surfacing in other quarters at much the same time. Hadorn et al. (2006) point to Eric Jantsch’s ideas, about the reformation of higher education along trans-disciplinary lines in order to co-ordinate activities towards a common
good, as far back as 1972. They suggest that the nature of sustainable development research is predicated on whether the processes concerned have a common understanding, but in a fashion that we would now regard as multi-disciplinary in that it draws only what it needs from contributing disciplines. Davies and Devlin (2007), on the other hand, point to areas where two or more disciplines combine their expertise to address an area of common concern, such as the AIDS pandemic, the water crisis in Australia, and climate change. Brand and Karvonen (2007) suggest that sustainable development poses challenges to the discourse of technical experts and that many existing models do not fit within traditional disciplinary boundaries. In this context, the education of engineers and scientists in sustainable development literacy has to be regarded afresh. Lourdel and colleagues (2005) look at a number of approaches to education for sustainable development for engineers and emphasize the need for a holistic approach: “[t]heoretical classes are not sufficient. It seems important to help them to transpose theoretical knowledge into professional and day-to-day activities.” However, she advocates a variety of student-centred approaches, including simulations, case studies, and cognitive mapping; whereas we confined ourselves to a problem-based approach (for a more detailed explanation of this approach, see Engel et al., 2007).

Curriculum Design

In our pilot module, the strategy for curriculum design was to set up a detailed, step-by-step process, involving the use of four advisory groups (see Tomkinson, Engel, Tomkinson, & Dobson, 2007) to:

- define a working definition of ‘Sustainable Development’;
- identify abilities and skills that ought to be developed in the pilot module in the context of realistic case studies;
- identify how the learning outcomes of this module might be assessed and how successful participation by the students might be recognized; and
- monitor and evaluate the process of implementing the pilot module, including how staff commitment to a new approach to teaching and learning might be recognized.

Advisory groups were drawn largely from senior academic staff from the Faculty of Engineering and Physical Sciences, and set up so that each individual had a limited time commitment. In addition to the direct impact on curriculum design, other aims of this approach were to underline the credibility of the profession-based content and to foster an innovative educational approach throughout the faculty. In a slightly later study (Tomkinson, Engel, Tomkinson, & Lawson, 2008), but concurrent with the implementation of the module, we undertook a Delphi consultation amongst leading scholars in engineering for sustainable development within the UK. The initial round of questions was built, to some extent, on the experience of the advisory groups.

The Delphi Study

From the Delphi study, the main challenges in sustainable development for engineers were generally seen to be social and political, rather than technical – being socially and politically skilled as well as technically so. There was also a feeling that practicing engineers must confront conservative ideas and reluctance to change in issues of sustainable development. The key responsibilities for young professionals were perceived to be communication followed by the raising of awareness with technical skills. In terms of tasks that newly qualified professionals might be expected to undertake, the chief concerns were in handling complex problems (essentially the wicked problems mentioned above) and in systems modelling. Individual engineering disciplines identified specific tools and techniques that might be expected to be employed (though the number of respondents was too small to make clear distinctions), but another major task was seen as that of participating in change management. Relating all this to the curriculum, the main view was that sustainable development should be embedded throughout and student-centred learn-
Dealing with Wicked Global Problems

ing methods, particularly role play and case studies, were most appropriate. A significant number of respondents felt that sustainable development should form a compulsory element of the curriculum and others felt that making it compulsory was the only way to get students to take on issues of sustainable development.

The holistic nature of the approach advocated here aligns with our view of an inter-disciplinary approach and the underpinning concept of change management also comes through. Although problem-based learning did not specifically feature in the Delphi exercise, the emphasis on student-centred, experiential methods is broadly in line with this view.

The Pilot Module

The inter-disciplinary, problem-based module has now been run in two consecutive years. In the first cohort, the participants, arranged in six groups of eight, came from three engineering disciplines and Environmental Sciences. In the second cohort, the numbers doubled and the opportunity extended to students from a greater range of science disciplines, some of whom were studying on joint honours courses (e.g. Mathematics and English). Our goal was to achieve a ‘strand’ running through all three years of the undergraduate curriculum but pragmatism forced us to start solely with third-year students. This means that they had received two years of conditioning to traditional approaches, causing conflict between assessment for learning and for reward. In each year, the students were presented with five problem scenarios (these are shown in the Appendix) and given, normally, two weeks to complete the task. In many cases, students met between their weekly, two-hour timetabled sessions. In designing the exercises, a number of requirements were taken into account:

- problems should lead students to identify core principles of sustainable development;
- exercises should develop professional skills;
- each exercise should build cumulatively on previous ones;
- wherever possible, issues should be current;
- exercises should foster thinking across disciplinary boundaries;
- students’ own questions should lead to integrated learning; and
- formative tests should help students to plan their learning through informal, rapid feedback.

A unique feature of the course unit is the use of post-doctoral research staff as group facilitators. Their role is to help the groups to function, not to undertake active teaching; learning comes from the endeavours of the students themselves. The facilitators received training in problem-based learning and the art of facilitation; the training was also used as a selection mechanism. The facilitators met as a group after their weekly facilitation sessions, and this provided a mechanism for feedback, further development, and monitoring of the facilitators’ functioning during their group’s sessions.

Assessment and Evaluation

Assessment methods varied between the two years with the first cohort undertaking four forms of assessment: modified essay questions (see Feletti & Engel, 1980); a group project report; peer assessment (see Conway, Kember, Sivan, & Wu, 1993); and facilitator observation. For a single course unit we felt that this was over-assessment, and in the second year, reduced the assessment to three items: a group project report, the mark for which was modified by peer observations, and a reflective portfolio. However, this is still a substantial assessment load for students and staff alike.

The project has been evaluated in a number of ways (these are described more fully in Tomkinson, 2008). During the two years that the pilot
module ran, students and facilitators took part in nominal group processes (see Delbecq et al., 1975; Mackay, 2003). The student feedback in both years was remarkably similar, particularly in the ‘positives’: the students’ prime item in both years was the interdisciplinary nature of the course unit, together with the development of teamwork skills, the nature of the facilitation, the realistic content of the module, and the methods of assessment.

Assessment also featured on the negative side in both years. This was primarily because the first four exercises were intended to be formative and were not counted as part of the summative assessment process. Neither set of students liked the 9am start. Differences between the two cohorts tended to reflect changes that had been made between years. For example, the introduction of online support, through Blackboard Vista, was met with disapproval by the students in the second year; whereas the first cohort disliked the number of evaluation questionnaires to which they had been subjected, a feature that was much reduced in the second year.

The facilitators showed similar consistency in views between the years, with problem-based learning, imaginative tasks, and communication skills for the students all featuring positively. The interdisciplinary nature of the module and the development of the facilitators’ skills in teaching (actually, supporting learning) also featured strongly. There was more variety in the negative responses of facilitators between the two years, the principal difference being a gripe about pay, which had been reduced between years (the facilitators were already receiving pay as post-doctoral researchers and, in the second year, the university authorities deemed that they should only receive an honorarium). However, in both years, the facilitators were disappointed by the narrow range of disciplines represented in the student group, particularly the lack of any social scientists, and also by the range of topics covered – this is a feature of only using five scenarios. The negative stance of some students towards formative assessment was reflected here, particularly for the second cohort. The introduction of online support in the second year picked up an unfavourable mention of Blackboard Vista with the facilitators, despite a more positive view of the use of GoogleDocs.

As well as the university’s standard student satisfaction questionnaire, we applied a number of instruments designed to check on the students’ development over the duration of the course unit: a student self-perception questionnaire, designed by the university’s School of Education; a questionnaire based on the Readiness for Inter-professional Learning (RIPL) questionnaire (Mattick & Bligh, 2006), and a learning styles questionnaire (ETL Project, 2005). These were applied at the beginning and end of the unit. The learning styles questionnaire has also been used in the second year, but the analysis is not yet complete.

The results of the self-perception questionnaire indicated that students felt more confident about their knowledge and skills in this area at the end of the course unit and the learning styles questionnaire showed an increase in the application of ‘deep’ learning; however, the RIPL questionnaire results showed no significant differences, partly a result of high initial scores. The University’s standard questionnaires showed remarkably high student satisfaction on most items in the first year and only slightly less satisfaction in the second: the few dimensions on which the course unit did not score well were those where the questions asked were inappropriate to this approach to learning. In the first year, no students failed the module, but no students achieved a very high mark overall; though, a number achieved high marks on individual components. In the second year, the general range of marks increased, notably with more scores in the higher ranges.

This has been a successful start to a single course unit (it was Highly Commended in the UK’s Green Gown Awards 2007-8), but the ideas that it embraces are capable of much wider deployment. Our ideas are not solely confined to education for sustainable development. The core approaches and ideas could prove a useful starting point in redesigning university programmes dealing with complex global issues – specifically based on our curriculum design for active, contextual, cumulative, interdisciplinary, collaborative, and reflective learning. The report of the pilot study (Tomkinson, 2008), and its appendices, are designed to enable others to replicate
the approach to see to what extent the educational approach is transferable. A further report, following a second year of operation, is expected during 2009.

Global Citizenship or Sustainable Development: Does It Matter?

Clearly, there are ‘wicked’ global issues that do matter to each and every one of us. Also, higher education has a role to play in working towards remediation of these problems, but, does it matter what we call it? What we have set out to achieve with our students is essentially a portmanteau of knowledge and skills that can help in tackling complex problems and in helping to manage change: we have called this ‘sustainable development’ but other titles would be equally fitting. In our view, the key to the future of higher education is in educating young people in a realistic way, in inter-disciplinary groups using problem-based learning approaches.

References


**Biographies**

Bland Tomkinson is the University Adviser for Pedagogic Development at the University of Manchester, United Kingdom. His current role has two principal aspects: first is the development of academic staff and others who teach, and second, the encouragement of research and development into teaching and learning. In the latter role, he has engaged on two studies looking at the embedding in the curriculum of education for sustainable development and also smaller studies on the use of portfolios for academic and personnel decision-making.

Charles Engel is a Visiting Academic in the Department of Lifelong and Comparative Education at the Institute of Education, University of London, United Kingdom. His interests include national and international consultancies on curriculum design, problem-based learning, assessment of students’ progress and achievement and evaluation in medical and health professional education, as well as interdisciplinary and inter-professional approaches, particularly to issues of global societal responsibility.

Rosemary Tomkinson is the Academic Support, Teaching Innovation and Development Adviser in the Faculty of Engineering and Physical Sciences at the University of Manchester, United Kingdom. Prior to this she was the Assistant Director of the Teaching and Learning Support Centre at UMIST. Her academic support role is responsible for the programme of development for new lecturers in the faculty, development of those involved in student support, and encouragement of curriculum design and enhancement.
## Appendix

### Details of Student Problem Scenarios

<table>
<thead>
<tr>
<th>2006-7</th>
<th>Aspects</th>
<th>Task</th>
</tr>
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<tbody>
<tr>
<td>Wheels</td>
<td>Implementing change within a company; sustainability definitions, tools and techniques; corporate attitudes; understanding stakeholders’ perspectives.</td>
<td>Recommend sustainability initiatives for a manufacturing company. a consultant’s letter provides a list of projects that students may decide to investigate and could choose to include in their plan.</td>
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<tr>
<td>Shelter</td>
<td>Implementing change across national boundaries; impacts of natural disasters on communities; stakeholder cooperation; infrastructure and logistics; cultural, etc. differences; sustainable design.</td>
<td>Develop a strategy for transitional accommodation (housing, schools, clinics, etc) after a natural disaster; analyse possible alternative approaches and propose a sound and sustainable strategy for their construction; achieve a realistic and workable balance between international aid and local skills and manpower.</td>
</tr>
<tr>
<td>Rules</td>
<td>Implementing change via regulation; impact of environmental regulation on different stakeholders; impact on supply chain; minimising life cycle impacts.</td>
<td>Provide guidance for small companies regarding the UK’s implementation of new directives concerning electronic equipment manufacturer; produce a press release describing how negative life cycle impacts are minimised by the directives and identify other stakeholders who will be impacted by the legislation.</td>
</tr>
<tr>
<td>Energy</td>
<td>Implementing change through new technology; cost-benefit analysis; barriers to new technology; infrastructure support for new technologies.</td>
<td>Assess social, financial, and environmental impacts of wind-turbines, solar water heating, geothermal heat pumps, and photovoltaic cells, with an initial cost-benefit analysis to determine their viability; understand the implications of and barriers to introducing new technology.</td>
</tr>
<tr>
<td>Procurement</td>
<td>Implementing change driven by investor pressure; supply chain management; assessing sustainability; benchmarking.</td>
<td>Evaluate a fictional supermarket chain against industry good practice in terms of corporate social responsibility; review criteria for industry benchmarking and develop proposals to ensure approval by the ethical investment community.</td>
</tr>
<tr>
<td>Plastic</td>
<td>Implementing change through engaging with public and stakeholders; understanding barriers to implementing technical solutions; sustainability definitions, tools, and techniques; importance and methods of stakeholder engagement; handling conflicting viewpoints; unbiased information for decision making.</td>
<td>Recommend steps for engaging with the public and other stakeholders regarding construction of a new PVC recycling facility, in the north west UK; having identified the key controversial issues surrounding the suitability and safety of PVS as a material, presenting this to the public in a clear and balanced way using the format of a short information leaflet.</td>
</tr>
<tr>
<td>Water</td>
<td>Mechanisms for change within a large organisation; commercial pressures as a barrier to and a driver for change; accurate product information for change in consumer behaviour; corporate social responsibility and the supply chain; social, environmental and economic factors; handling conflicting viewpoints of different stakeholders; unbiased information for consumers.</td>
<td>Evaluate the feasibility and desirability of a ‘virtual water’ labelling scheme within a high street commercial food retailer; present this evaluation in a range of summary formats, suitable for commercial decision making, but with a strong awareness of the different viewpoints of a range of key stakeholders connected to this private enterprise; apply sustainable development principles to a contentious and challenging practical issue in an easily comprehensible, non-technical format.</td>
</tr>
<tr>
<td>Food</td>
<td>Supply chain management; supply chain carbon footprint reduction; reducing food waste; implementing change through new technology; cost saving as a driver for change; cost-benefit analysis.</td>
<td>Outline possible strategies for how an agri-corporation could introduce a novel real-time tracking service to the food and perishable crops supply chain and extract a financial return from it; identify overhead costs which would need to be covered, including: managing the activity, providing &amp; servicing the equipment, training in its use, help-desk support and steering of the ongoing R&amp;D development programme.</td>
</tr>
<tr>
<td>Dig</td>
<td>How legal instruments can both foster and hinder change; how different stakeholder groups resist and favour different mechanisms of change; how system wide mechanisms can accommodate change; CSR to support sustainable development; how the law can underpin sustainable development; economic, social, and environmental aspects of sustainable development within firms.</td>
<td>Identify the scope and implications of the requirements in the companies act 2006 for UK multinational companies in the mining and natural resources sector; in addition to the identification of legal requirements, the exercise requires recognition of key CSR issues and consideration of how these issues can be accommodated within a multi-stakeholder setting of competing interests.</td>
</tr>
</tbody>
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Internationalization at the university level may be envisioned in various ways. Often, it is considered along the economic dimensions: money in, money out; international fees; and international articulation possibilities for both education and business. Harris (2008) argues for a less economic, more cultural interpretation of internationalization. Otherwise, internationalization is in danger of degenerating (or translating) into instrumentalism and consumerism. This paper focuses on the classroom where so many students themselves are international beings and looks at how faculty might manage, integrate, and learn from this classroom-level reality.

Prompt for This Paper

I have worked in the presence of multilingual writers for decades as a teacher of English as a second language and as a teacher educator. I kept my practice fresh, and generally I was satisfied with how the students produced (in many cases, reproduced) what was expected of them. Then, I became aware of the field of contrastive rhetoric, which is the study of writing values and conventions and how they may vary across cultures. At the time, I was analyzing autobiographies authored by those who have crossed languages and cultures. These first person accounts underscored the powerful effects of our writing. I began to understand the many implications of these culture-specific writing conventions – textual, contextual, cognitive, emotional, and political. I learned much about what it feels like to write in a second language and what is involved in writing in languages other than English. From a pedagogical perspective, I re-considered what it was that we in the English for Academic Purposes (EAP) professional community have been expecting multiliterate students to produce, and how we have been requiring them to suppress a powerful resource – their first language writing knowledge. Why, I began to wonder, did I work so hard to mainstream the written expression of my students when on many occasions their fresh and foreign ‘take’ on a topic startled me into paying attention? Writers from other cultures, “texts, and interpretations can challenge us to recognize our own rhetorical prejudice and to reconceptualize our perspectives on academic discourse – a mutually enriching process” (Zamel & Spack, 1998, p. xi).
I began asking bi and multilingual students what it felt like to conform to a new writing style. In addition, I had my graduate students in applied linguistics interview multiliterate writers to collect experiences on writing across languages. I was sobered by their findings. The connections between writing and identity are powerful. And although I teach EAP, which means that writing plays a major role in our class discussions, I believe that anyone working with students from other cultures should consider western academic writing as just one of many possible cultural constructs. I advocate that we in the academic community re-examine why it is that we maintain such a narrow view of what is acceptable in academic writing. I argue that we have a lot to learn by becoming more flexible, open readers/evaluators of texts authored by those who are writing their knowledge in a language other than their first.

What is Contrastive Rhetoric?

Contrastive rhetoric “is an area of research that has identified problems in composition encountered by second language writers, and by referring to the rhetorical strategies of the first language, attempts to explain them” (Connor, 1996, p.5). Faculty prepare students for the traditional academic genres and language of rhetoric, but should also familiarize themselves with the writing conventions that students bring with them: “A broad range of the world’s people adopt models and norms diametrically opposed [to Western notions of voice]: they foreground subtle, interpretive, interdependent, non-assertive and even non-verbal characteristics of communicative interaction” (Ramanathan & Kaplan, 1996, p. 22). International students who write in North American university classrooms will likely continue as commuters among literacy communities (Canagarajah, 2001) and therefore will need a portfolio of writing skills appropriate for their various contexts. Total adaptation to North American academic rhetoric can no longer be a goal of the university.

Some international students come to our campuses of their own volition; others are actively recruited in the drive to globalize our classrooms, to enrich our understanding of other worlds, other worlds. What happens when multiliterate students are asked to write their knowledge in our Canadian classrooms? What happens when a professor or a teaching assistant receives a paper that is shaped in unusual and unexpected ways? The following features (or irregularities, from a Western reader’s point of view) may be present:

- The thesis appears at the end of the text rather than up front.
- The language has more passion than the reader feels comfortable with.
- The progression appears circular or digressive rather than linear.
- The readers are expected (respected?) to draw their own conclusions.
- The writer cites people from the past, perhaps many decades or centuries in the past.
- The authorial voice presents as humble rather than assertive.
- There may be no meta-discourse, no road-map, telling the reader where the writer is going or reviewing where she/he has been.

How is this work read? Is it read? What comments are noted? What suggestions are made (or criticisms leveled)? How welcomed are multiliterate international students and their take on the world into the Western academic community of practice?

Textual conventions – what is enacted, expected, and valued in the writing of a culture – are local and ideological. What native speakers of English in North America (hereafter referred to as the West) consider as logical and clear and effective is only one culture’s notion of logic, clarity, and effectiveness. In 1966, Robert Kaplan, an applied linguist, wrote a seminal, often-cited paper on contrastive rhetoric. He used rough diagrams to represent how some cultures tend to shape their written discourse. For example, English writing was illustrated as linear in organization; Oriental writing as circular; and Semitic writing as a series of parallel constructions that are
more often coordinated than subordinated. Those who came after Kaplan (and Kaplan himself) criticized his 1966 paper and its claims for a variety of reasons: it was simplistic, even essentializing; many languages were omitted from the initial study; distinct language groups were conflated and only organization was studied, not other variables of writing. As well, Kaplan’s early work was called ethnocentric; it presented English patterns as the standard and viewed the writing patterns of other cultures as being more *something* than English or less *something* than English.

Since 1966, the field of contrastive rhetoric has expanded dramatically. Panetta’s (2001) text, *Contrastive Rhetoric Revisited and Redefined*, broadens contrastive rhetoric to include not only writing conventions and values across language groups, but also writing across geopolitical, gender, sexual orientation, and economic borders. I have recently been examining how contrastive rhetoric can be described from a sociocultural perspective, which views communication as co-constructed, interactive, negotiated, and “dialogic” (Bakhtin, 1981), rather than a series of rules or prescribed moves. Wertsch, a sociocultural theorist, acknowledged the tension that occurs when one uses a new tool, or means to act upon the world. The new mediational means for an international student are the English language and western academic style of writing: “New mediational means transform mediated action” (Wertsch, 1998, p. 25). These dimensions of potential difference in writing include purpose; organization pattern; reader/writer responsibility; evidentials; and authorial voice. Many may have noticed some of these features in their own writing if they are multiliterate.

**Purpose**

Writing may be considered a vehicle for individual self-expression, as it is in the West, or as a medium for expressing solidarity and shared social purpose, as it is in Japan, according to Carson (1992).

**Organization pattern**

Korean texts seem to be characterized by indirectness and non-linear development. The four-part pattern of Korean prose is transferred to writing in English (Eggington, 1987). There is a delayed introduction of purpose (Hinds, 1990) and the main topic appears at the end of the text (Connor, 1996). Clyne (1987) described German writing as digressive and propositionally asymmetrical, while longer sentences and greater elaborations are present in texts authored by Spanish writers (Reppen & Grabe, 1993, as cited in Connor, 1996).

**Reader responsibility/writer responsibility**

Hinds (1987, 1990) noted that in Chinese writing (as in English writing), the onus is on the writer to make things clear, whereas Japanese writers are more likely to expect the *readers* to make their own sense of the text – the intent being to stimulate the readers rather than to convince them.

**Evidentials**

What counts as evidence in writing? Leki (1992) noted that personal experience simply does not count in some cultures: “Quoting famous people is what constitutes evidence” (p. 68). She also observed that conventions of argumentation in English call for facts, statistics and illustrations; other cultures, however, “rely heavily on analogy, intuition, the beauty of the language, and the opinion of the learned of antiquity” (p. 92).

**Authorial voice**

Atkinson (2001) defined voice as “the cult and culture of personal opinion” (p. 108). This seems to me to be a particularly Western notion of voice. What happens, I ask, when a person’s culture trains him/her to background personal opinions? Is this absence of voice, or a difference in concept of voice, of textual self? Fan Shen (1998), one of many translingual writers who have written moving accounts of indoctrination into English academic writing, pointed out that “the ‘I’ must be buried in writing in Chinese” (p. 124). He described the lack of sensitivity on the part of Western faculty to understand the enormity of the task.
Research and First Person Accounts

Research indicates that first language (L1) writing practices and values influence second language (L2) writing (Casanave, 2003; Cumming, 1989; Connor, 1996; Friedlander, 1990). As well, first person accounts like Shen’s (above) highlight the dissonance that occurs when writing values collide. Kamani (2000), from Bombay, wrote: “In America I was expected to come clean on information, feelings, ignorance, speculations, judgment – largely taboo in India and considered bizarre” (p. 100). Resistance was Brintrup’s (2000) reaction when she came from Chile to be a doctoral student in the United States: “To be more effective and efficient academically I received advice like this: ‘Forget everything you learned in the past and start again.’ Why this necessity of washing off my mind…? I felt like something had been taken away, like my skin and my verbal conception of the world” (p.15). Canagarajah (2001) wrote of the criticism he received by both of his writing communities as he composed in Tamil and English. When he applied Western academic writing style to a text he wrote for his Sri Lankan academic community, his colleague reacted strongly and negatively. His writing seemed pompous and overconfident. He wrote, “Thanks to my colleagues from Sri Lanka, I have become alert to the contradictions of representing periphery concerns and subjects in a discourse that is so alien to their interests and traditions” (p. 35).

Zamel (1998) expressed concern over the reductionist and formulaic possibilities when teaching/ acquiring academic discourse. Students struggle as they “defer to the voice of the academy…and disguise themselves in the weighty imponderable voice of acquired authority …losing themselves in the process,” noted Sommers (as cited in Zamel, 1998, p. 188). Further, Zamel suggested, what is reified as academic discourse is not as well-defined as one thinks.

Additionally, teachers cannot really claim to know what discourse communities they are preparing students for. In five years time, much of the communicating may be in multimodal format or otherwise quite unlike the contexts of the present or past. Leki (2006) examined the accommodations made by professors for ESL students and found they were tolerant of mistakes – forgiving errors and giving longer time to write. Leki did not note efforts on their parts to change how they read work. Wrong not different seemed to be the message. Perhaps more distinctions could be made between incorrect and different.

There is a dilemma then. How, and to what extent, should international students be socialized into the Western academic writing community? I argue for a flexible, additive intent rather than a prescriptive, subtractive one. The goal of academic writers today should be to build writing repertoires, “an everchanging portfolio of skills” (Gee, 2003, p. 47) so that as international citizens, they may move among writing cultures easily. Universities are preparing students, and students are preparing themselves to operate in multiple literacy communities. Mao (2004) acknowledges the inevitability of border crossings: “rhetorical borderlands where creative heteroglossia becomes the norm” (p. 54). As globalization flourishes, the likelihood increases that readers of our students’ texts will be speakers of other languages, or speakers of English as an additional language. Steinman (2003) writes, “Diverse readership implies diverse notions of what constitutes good writing” (p. 85).

Multiliteracies and Critical Theory

Multiliteracies

The New London Group refer to creating meaning as design, and call for using all available designs, sound, distance, gesture, different modalities (not only print), when representing knowledge. The first language writing patterns is one of those designs, I would argue. According to the New London Group: “We are both inheritors of patterns and conventions of meaning while at the same time active designers of meaning,” and they argue that “productive diversity…the multiplicity of cultures, experiences, ways of making meaning, and ways of thinking—can be harnessed as an asset” (Cope & Kalantzis, 2000, p. 7).

Critical Theory

Whose knowledge counts and whose does not? Critical theory examines the hegemony involved in deval-
using someone’s form of self-expression and attempting to erase it. According to Dei (2003), “We must be humble when claiming to know.” Critical theory meets pedagogy meets contrastive rhetoric in a call for constructivism in the classroom, that is, knowledge being created by all.

Zamel (1998) suggested that “rather than emphasizing what students must change, what they must become in order to accommodate our discourse, we work to sustain and extend the histories and abilities that students bring with them” (p. 299).

Shi (2003) wrote of Chinese writing teachers who returned from training in the west having been sold on Western academic writing and planning to pass this on to their students. Clearly, English and its rhetorical style were viewed as “linguistic capital” to use Bourdieu’s (1977) term. There are implications – personal, linguistic, sociocultural, and political. Maya (as cited in Comfort, 2001), a student, explains:

A moth is drawn to the light and ultimately consumed by it. I do not want graduate school to be such an experience for me. The question hovers: How close to the light can I get and not be drawn into destruction? I must be cautious…I must survive, wings and spirit intact.” (p. 91)

Changes in the Classroom

I suggest some implications for practice and I invite readers to add some of their own:

- We become aware of and acknowledge the powerful resource in our classrooms that is first language writing. Multiliteracy, with its respect for multiple sources and multiple (re) presentations, is both a reality and a goal.
- We proceed cautiously and sensitively when commenting on the writing practices of international students. Ballard and Clanchy (1992) found that “when faced with writing that falls out of their own notions of acceptable style and pattern of argument, [teachers] pepper the margins with ‘irrelevant,’ ‘incoherent,’ [and] ‘illogical’” (p. 20). Instead, we could ask: “Is the writing disorganized or differently organized. Is it illogical, or differently logical?” (Steinman, 2003, p. 88).

- As students add to their writing repertoires, we in the Western academic community must add to our reading repertoires. Stepping out of our zone of comfort would be good. Can we only shape or are we willing to be shaped?
- We might reconsider the particular demands we make in writing and re-prioritize what really matters with respect to the intelligibility of a text as we become familiar with and appreciate hybridity of texts, and accents in writing.

One way to enable students to find their way in the academy, we believe, is for us to accept wider varieties of expression, to embrace multiple ways of communicating. This is exactly what we are asking students to do. (Zamel & Spack, 1998, p. xi)

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**Biography**

Linda Steinman is a faculty member in the Department of Languages, Literatures, and Linguistics at York University, Toronto, Ontario. She teaches in the graduate Applied Linguistics program and in the credit English for Academic Purposes undergraduate program. Her research interests include intercultural rhetoric, narrative, and sociocultural theory.
Assessing the Personal: Inclusion, Anecdote, and Academic Writing

Linda Westphalen
University of Adelaide

In the School of Education at the University of Adelaide, the use of oral evidence is increasingly common as students engage with reflective practices now dominant in teacher-education programs. These experiences offer both a dynamic perspective and a challenge to academic assessors and raise three questions, each of which are addressed in this paper: How should one regard oral history or personal experience in an academic context? How does one assess an academic argument which uses oral evidence or personal experience? What does it mean to be culturally inclusive in one’s teaching? This paper argues that academics must accept the disruptive challenge of alternative constructions of knowledge, including personal histories, if the notion of what it means to be culturally inclusive is to be more than a token.

Introduction

As academic institutions become increasingly inclusive of students from diverse backgrounds, the students’ cultural and historical contexts form a dynamic scaffold upon which Western academic conventions of knowledge (whatever they are) are grafted. Yet, academic teachers in universities frequently have little understanding of the cultural and historical contexts of their students, thus endangering the viability of the ‘graft.’ Ironically, when students provide such contexts for their conceptual development, especially as a reflective practice in their assessed writing, the experience fragments presented are often un-assessed relative to other data. This is particularly so if the experiences are from a minority culture, such as Indigenous Australian - one significantly removed from the academic’s own ontological view.

This paper addresses some of the issues concerning inclusive education and cultural difference, with particular regard to the use of oral history, personal experience, or anecdote in assessed essays. The paper takes its theoretical lead from the research of mathematics teacher-educator, Ron Tzur (2001), who contends that development occurs “via reflection on activities” and “the presentation and analysis
Inclusion, Anecdote, and Academic Writing

of fragments of experience” (p. 260). In keeping with social constructivist models of learning, and drawing on the work of Dewey, Piaget, and Schön, Tzur considers that “reflection on one’s actions and on those of others while interacting with people and objects in the environment...[is] the mental root of conceptual development” (p. 261). This contention, along with an almost axiomatic distrust of oral sources by academics, gives rise to important questions for teachers in universities, notably the following:

1. How should one regard oral history or personal experience in an academic context?
2. How does one assess an academic argument which uses oral evidence or personal experience?
3. What does it mean to be culturally inclusive in one’s teaching?

‘Academic’ Writing?

Historically, writing has functioned to keep records more permanently and accessibly than in oral forms. Academic institutions have long asserted the primacy of the written over the oral, where the former is assumed to be objective, factual, and verifiable, and the latter is subjective, unreliable, and transient. Orally held knowledges, such as those pertaining to life histories, are often distrusted in academic discourses unless they can be supported by written evidence, while the absence of written records is understood to infer an absence of knowledge (e.g., Rose, 2001, p. 112-113).

An Indigenous student, for example, is thus confronted with a dilemma. If she records her experiences without supporting documentation, her oral histories and knowledges are suspect. If she does not record her experiences, she is considered an ‘insider,’ as having nothing significantly different in her experience to report. Either way, the dilemma materially disadvantages the student.

All evidence is experienced, whether constructed in academic contexts or not, oral or written, qualitative or quantitative. This contention goes to the very heart of education as it is theorised to operate, that is, as a subjective construction of knowledge based intimately on the prior knowledge and contemporary perspectives of the learner (Dewey, 1938; Piaget as cited in Dunn, 2005). Humans, thus, experience data at all levels of its formation, interpretation, and consumption: its conception as a primary source, its analysis relative to other sources, and its “ingestion” by readers, who actively reconstruct the data, cognitively and creatively making sense of what is seen or heard, relative to their own past and current contexts (Eagleton, 1996, p. 66-67).

In the development of meaning making, then, our engagement with data depends, to a large degree, on how it sits relative to other data, including our own experiences and memories. Jan Pettman (1992) proposes:

Meaning is constructed by position and relationship, rather than by what ‘really’ happened. This is not to say that memory is not true or accurate; rather that it is a reconstruction which speaks to where the person is now, and to the social setting within which that person now stands. (p. 142)

In an academic context, life history data should not be considered as particularly different from other data, especially given that, although written data has academic primacy, this does not necessarily equate with accuracy. Simply, just because something is written down, does not make it more ‘true’ than if it were articulated verbally. Academic endeavour in western universities is grounded in critique, yet oral sources, including personal histories, are not critiqued so much as ignored in tertiary learning, particularly in the non-social sciences and humanities. If academics (whether in departments of education or not) are to understand the cultural contexts of the students who attend their courses, and to effectively address the issue of the nexus between experience and constructions of learning, then this rejection needs to be reconsidered, especially with regard to assessment.
Assessing the Personal

As Cooney and Krainer (1996) contend, “teacher education programs are becoming less technically oriented and more process or constructivist oriented with an emphasis on reflection and self analysis” (p. 1159). This provides a context for some assessed academic writing in teacher education courses in the School of Education at the University of Adelaide. Students reflect on their own experiences of education (primary, secondary, or tertiary), since these experiences have a kind of forward ‘ripple’ effect on the developing ontologies, core values, and pedagogies of people who aim to be teachers. Events in peoples’ lives act as points around which evolving consciousnesses of what it means to teach and be taught recur.

Reflective practice is fundamental to education, but given the nexus between experience and learning outlined above, this practice is an education-wide phenomenon. Although essay questions have clearly required reflective elements in some courses, little provision has been made to unpack oral history or reflection relative to formal assessment criteria or matrices until recently.

Assessment has different purposes: for example, testing conceptual understanding and skills, the development of an argument, scaling a student relative to others, and so on. To reject a personal history because it has not been asked for in an essay question is, in some circumstances, justified. To not acknowledge it in an assessment when it has been explicitly asked for is ethically questionable. In either event, failure to give due recognition to a personal history undermines the student’s cultural identity and perspectives, contributes to subjugation of (minority) knowledges and ongoing colonisation, and asserts a power regime beyond a teaching relationship. Materially, it disadvantages a (minority) student who has sometimes shared a significant and/or personally confronting event with a lecturer.

It also suggests that experiences in the past have no political, social, or historical context at the time of the event, and no connection with the present subjectivity of the student. While direct experience allows the connection between the personal and the political (in keeping with the long held feminist axiom), the personal is also the historical and/or the counter-historical, since the autobiographical element also offers what, for the author/narrator at least, is a self-evident and authentic event, which can present a dynamic challenge to “mainstream” discourses (Longley, 1997, p. 213), a space where the university routinely functions.

Given these considerations, assessing the personal histories in essays is as important as assessing other elements, such as the argument or the conceptual comprehension. First, though, the whole educational ‘package’ provided for the student, in whatever subject area, must contend with the social construction of learning outlined in the first section of this paper. Subject curriculum writers must set learning outcomes that address the cultural and historical contexts of students, not just because all students’ learning will be enhanced, but because inclusive practice demands that we understand our students and consider their learning needs culturally, especially with regard to those students who occupy spaces of difference.

Second, if academics ask for reflective practices, such as the integration of oral/experiential evidence in an academic essay, then the process of integration needs to be explicitly taught. This teaching can happen relative to assessment criteria, and these should show a clear distinction between poor and good integration of oral evidence with other data. The oral evidence also needs to be considered relative to other aspects of the overall assessment. A marking matrix is included as an example (Table 1).

A key consideration in the assessment matrix is the idea that personal history, anecdote, or oral evidence should not just be presented, but that it should be both synthesised with other arguments and analysed. In other words, the student must make the personal history meaningful within the context of the essay and relative to other arguments presented. However, while this analysis could involve critique of the personal history, this should not be expected of the student, nor should s/he be penalised for failing to critique his/her own experiences. Depending on the context, critique could be construed as a requirement to self-depreciate or undermine a cultural practice or identity, all of which are counter to inclusive practice.
<table>
<thead>
<tr>
<th>Table 1</th>
<th>Sample Marking Matrix</th>
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<table>
<thead>
<tr>
<th>Fail 0-44%</th>
<th>Fail 45-49%</th>
<th>Pass 50-55%</th>
<th>Pass 56-64%</th>
<th>Credit 65-74%</th>
<th>Distinction 75-84%</th>
<th>High Distinction 85+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Description</strong></td>
<td>Fails to satisfy the minimum requirements</td>
<td>Just fails to satisfy the minimum requirements</td>
<td>Satisfies the minimum requirements</td>
<td>Demonstrates a sound understanding</td>
<td>A very high standard of work which demonstrates originality and insight</td>
<td>Outstanding or exceptional work in terms of understanding, interpretation and presentation</td>
</tr>
<tr>
<td><strong>Knowledge of topic</strong></td>
<td>Scant knowledge of principles and concepts</td>
<td>Some knowledge of principles and concepts, but insufficient to communicate appropriately in the topic or to serve as a basis for further study</td>
<td>Knowledge of principles and concepts adequate to communicate appropriately in the topic or to serve as a further study</td>
<td>Good knowledge of principles and concepts</td>
<td>Evidence of an understanding of deeper and more subtle aspects of the topic</td>
<td>Demonstrates insight, awareness and understanding of deeper and more subtle aspects of the topic. Ability to consider topic in the broader context of the discipline</td>
</tr>
<tr>
<td><strong>Articulation of argument</strong></td>
<td>No evidence of ability to construct a coherent argument</td>
<td>Some ability to argue coherently, or argument illogical</td>
<td>Sound argument based on some evidence, or sound argument, but off topic</td>
<td>Well-reasoned argument based on broad evidence</td>
<td>Evidence presented with originality and independent thought</td>
<td>Significant demonstration of originality and independent thought</td>
</tr>
<tr>
<td><strong>Oral Evidence (Optional)</strong></td>
<td>Used badly without analysis and/or in lieu of academic sources</td>
<td>integrated poorly, with little analysis</td>
<td>Adequate synthesis, with some attempt to analyse relative to other sources</td>
<td>Good use of oral evidence, with clear integration and analysis relative to other sources</td>
<td>Justified use of oral sources, synthesis, with strong analysis</td>
<td>Creative synthesis of oral sources, justified, with evidence of analytical critique and insight</td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td>Very little evidence of having read any of the core texts and materials</td>
<td>Some evidence of having read core texts and materials</td>
<td>Evidence of having read and understood some core texts and materials</td>
<td>Thorough understanding of core texts and materials</td>
<td>Evidence of reading beyond core texts and materials</td>
<td>Strong evidence of independent reading beyond core texts and materials</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td>Inconsistent and difficult to follow</td>
<td>Poor expression in several places</td>
<td>Adequate expression</td>
<td>Clear language, use of formal writing style</td>
<td>Effective use of complex language</td>
<td>Conceptual thinking expressed effectively</td>
</tr>
</tbody>
</table>

These criteria are worth 50%
<table>
<thead>
<tr>
<th>Structure Font Spacing Margins Introduction Discussion Conclusion</th>
<th>Fail 0-44%</th>
<th>Fail 45-49%</th>
<th>Pass 50-55%</th>
<th>Pass 56-64%</th>
<th>Credit 65-74%</th>
<th>Distinction 75-84%</th>
<th>High Distinction 85+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No attempt to meet structure criteria</td>
<td>Some attempt to meet structure criteria</td>
<td>Adequate structure</td>
<td>Clear use of structure with all requirements met</td>
<td>Structural complexity effectively expressed</td>
<td>Structural complexity with significant demonstration of originality</td>
<td></td>
</tr>
<tr>
<td>Referencing and Bibliography</td>
<td>No references or no bibliography</td>
<td>Not sufficient detail in referencing and bibliography</td>
<td>Minimum level of referencing and bibliography</td>
<td>Consistent referencing and bibliography adequate</td>
<td>Referencing system used accurately and bibliography detailed</td>
<td>Referencing system used thoroughly and precisely, and bibliography extensive</td>
<td></td>
</tr>
</tbody>
</table>

Note: This draft was adapted by Linda Westphalen, School of Education, University of Adelaide, South Australia, 2008. The oral evidence section is included with two other key criteria, knowledge of the topic and articulation of the academic argument. These three areas are given more weight than elements to do with academic conventions, such as structure and language. This draft builds on earlier versions of the same matrix, currently in use. Space for further comment is also provided in the student version.
Inclusive Cultures

Graham and Slee (2007) contend that “authentically inclusive education invites the denaturalisation of ‘normalcy’ to arrive at a ground zero point from which we banish idealisations of centre” (p. 280). They continue by arguing that, “although predicated as natural and true, the rule of the norm is statistically derived, negating the diversity to be found within nature and the naturalness of diversity” (p. 281). In other words, inclusive practice includes, ironically, reflecting on and critiquing the mythic centre or “norm” (however this is constructed) which can withhold access to students constructed as Other relative to itself. In addition, while minorities exist and are marginalised, a lecturer can never be certain just where diversity will challenge the assumed paradigmatic “norm” of the “centre.” Students do not necessarily wear their difference (however this is constructed) overtly. This, in addition to the fact that the issue of inclusion and anecdotal evidence can affect any student, is why the word ‘minority’ is bracketed above.

Longley (1997), referring to “multicultural writing,” asserts:

[F]amily histories are providing new historical information in the form of recorded memories, which have in the past been considered irrelevant or peripheral to Australia’s national self-image...they are actively changing public understanding of the nature of the genre of national history in terms of its conventions, its ideologies and its principles of selection...Family history as micro-history provides an ongoing and cumulative challenge to the authority of established forms of macro-history. (p. 213)

This challenge to the “authority of established forms of macro-history” should be extended to include the authority of the institution of the academy itself.

The role of education has been long debated by theorists (Austin, 2007, p. 8-24). While university researchers usually see themselves at the forefront of critical pedagogies, aiming to positively transform the lives of humans, particularly the marginalised and disadvantaged, how far they are able to reflect on the exclusionary tactics and barriers in their own teaching, and about the institutions which locate and (often) fund their research, is unknown. Additionally, to elicit change within the university – to alter the very paradigms which valorise ‘white’ western institutions and constructions of knowledge – is not easy, especially by members of a privileged community whose interests are served by maintaining a status quo. Students are in an unbalanced power relationship relative to academics: those who challenge academic authority take a very big risk indeed.

In Australian universities, there is recognition of the need to address the cultural diversity of students in course offerings (see University of Adelaide, 2008); however, there is a great deal of mileage between understanding cultural diversity and implementing inclusive policies, some of which will undermine the fabric of universities themselves. When a student reports that they have been admonished for speaking ‘like an Asian’ in a bridging program designed to assist international students in integrating in an Australian university, this gap becomes (among other things) just plain embarrassing.

Cultural diversities need to be understood in terms of power, hegemony, diasporas, hybridity, gender, sexualities, and differences in abilities. Inclusive practices involve relating all of these things to academic subject areas and professions and accepting that universities, as depositories of knowledge, represent the privileged and selective epistemologies and ontologies of the people in power. Anthropologist Deborah Bird Rose (1999) suggests that Western thought and action is “dominated by a matrix of hierarchical oppositions which provides powerful conceptual tools for the reproduction of oppression” (p. 176). She argues that:

A critical feature of this system is that the ‘other’ never gets to talk back on its own terms. The communication is all one way, and the pole of power refuses to receive the feedback that would cause it the change itself, or to open itself to dialogue. Power lies in the ability not to hear what is being said...The self sets itself with a hall of mir-
rors; it mistakes its reflection for the world, sees its own reflections endlessly, talks endlessly to itself and, not surprisingly, finds continual verification of itself and its world view. … [I]t is narcissism so profound that it purports to provide a universal knowledge when in fact its violent erasures are universalizing its own singular and powerful isolation [sic]. (p. 176-177)

If critical pedagogies are to be maintained as realities in our tertiary education systems, if inclusion is to be realised, and if these are both to transfer to the workspaces of our graduates, then engaging with the chaotic multiple subjectivities who are our students in meaningfully dialogic ways is an essential process.

Conclusion

This paper has explored the inclusion and assessment of personal histories, as part of reflective practice and in acknowledgment of increasingly culturally diverse university communities. Understanding how differences can manifest themselves in the teaching-learning relationship is important. Instead of dismissing personal experiences on which new knowledges are grafted, academic teachers need to embrace the contexts students provide, however unruly and challenging, so as to meaningfully engage with inclusive practices.

References


Biography

Linda Westphalen is a lecturer in Cultural Studies in the School of Education at the University of Adelaide, South Australia. Her teaching and research interests focus on Cultural Studies issues to do with education, ICT, Media, and Higher Degree supervision. Her interests also include Gifted Education, Memory Work, and gender debates.
How does academic development relate to teaching? This paper references surveys conducted by David Gosling in the UK and in South Africa on academic development in Australia to provide a basis for international comparison. While many parties in a university contribute to the enhancement of learning and teaching, in most universities at least one organizational unit is established. The generic term for the enterprise can be said to be an ‘academic development centre’ (ADC) – the body representing the heads of organizational units in Australia is the Council of Australian Directors of Academic Development (CADAD). The data referred to in this paper indicates that, while ‘academic’ could embrace all aspects of the role of academics, including research, innovation, and contributions to community and professional bodies, the focus will be on learning and teaching. In this paper, I address the extent to which – and the sense in which – this is true. I use the results of several surveys conducted in Australia in 2007 and information emerging from a forum of Australian university personnel associated with the development of academics. These sources show that academic development units often perform a range of functions that go beyond the development of learning and teaching. Reviewing the available data, I conclude that the current role of academic developers is very much influenced by strategic pursuits of universities. In this climate, the potential for academic development to operate with the integrity of a practice informed by the disciplined study of learning and teaching is more limited than it was during periods where the understanding of learning and teaching drove the enterprise.

The Question Addressed

How does academic development relate to teaching? This paper references surveys conducted by David Gosling in the UK and in South Africa on academic development in Australia to provide a basis for international comparison. While many parties in a university contribute to the enhancement of learning and teaching, in most universities at least one organizational unit is established. The generic term for the enterprise can be said to be an ‘academic development centre’ (ADC) – the body representing the heads of organizational units in Australia is the Council of Australian Directors of Academic Development (CADAD). The data referred to in this paper indicates that, while ‘academic’ could embrace all aspects of the role of academics, including research, innovation, and contributions to community and professional bodies, the focus will be on learning and teaching.
Purpose of Curriculum Mapping

In the English and Australian context, three broad approaches to academic development have been distinguished. They emerged in a chronological sequence, but now they co-exist. They have been classed as teaching-oriented, learning-oriented, and strategically-oriented (Table 1; Ling, 2005).

<table>
<thead>
<tr>
<th>Approach</th>
<th>Focus of academic development activities</th>
</tr>
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<tbody>
<tr>
<td>Teaching-oriented</td>
<td>Teaching strategies/teaching tips</td>
</tr>
<tr>
<td>Learning-oriented</td>
<td>How students learn and what students learn</td>
</tr>
<tr>
<td>Strategic-oriented</td>
<td>Strategies to assure institutional objectives are met</td>
</tr>
</tbody>
</table>

In the current context, academic development is also influenced by strategic concerns in universities as they come to operate in a competitive environment (Marginson & Considine, 2000). In appealing to the clientele of universities and to their prospective employers, strategic approaches may address aspects of the learning environment ranging from online and library facilities to student support and the management of learning resources, including the management of staff. They are likely to involve quality assurance and improvement measures.

Methodology

In this paper, I take an interpretative, descriptive approach using literature and available data derived from surveys, expert input, and focus groups. The survey data includes:

- Data from a survey of directors of academic development in Australia. The survey was conducted by David Gosling (2008) and is largely based on previous surveys he conducted with directors of educational development units in the UK.
- Data collected from CADAD members by Sharon Parry and Yoni Ryan on the Roles and Responsibilities of Academic Development Units in Australia, November 2006.
- Data from a September 2007 survey of Australian academic developers on their roles in the development of academics as teachers and the strategies they employ. The survey was undertaken by the project team for the Australian Learning and Teaching Council (ALTC) project, the Development of Academics and Higher Education Futures (DAHEF) (Ling and Council of Australian Directors of Academic Development, in press). Support for the original work was provided by the Australian Learning and Teaching Council, an initiative of the Australian Government Department of Education, Employment, and Workplace Relations.
Expert opinion and focus group reflections are derived from records of a forum on academic development representatives of all universities in Australia involving academic developers and other key players in the development of academics. The forum was an element of the DAHEF project.

Data

Key components of the survey data informing the findings relate to the actual activities of academic development units placed against the importance given to possible functions of units.

Data for Australian directors of academic development derived from David Gosling’s survey are provided in Table 2 (data is given in percentage of responses). The table compares the extent of the provision with the importance directors attribute to activities. Responses given are those at the upper end of a five-point scale classified as provided to ‘a great extent’ and ‘moderate extent’ against those rated as ‘very’ or ‘moderately important.’

Data for Australian academic developers derived from the DAHEF project survey is provided in Table 3 (data is given in percentage of responses). The table compares the extent of the provision with the importance academic developers attribute to activities.

Findings

Academic development in Australia is a complex business. ADCs engage in functions such as provision of formal and informal professional development programs on learning and teaching, curriculum development, and support of individual or team learning and teaching initiatives. Some engage in educational research. They may also be responsible for: learning resources’ design and production; provision of educational media services and online learning management system support; study skills and student support; support of graduate attribute initiatives; and leadership and management development.

ADCs then have a strong but not exclusive focus on learning and teaching. Gosling’s (2008) survey of Australian directors of ADCs and the CA-DAD survey of its members indicate that the organizational units involved include the terms learning and teaching in their unit names in about a quarter of the cases reported. Just as many have titles that refer to professional development or staff development. Fewer have the label ‘academic development.’ Some have titles that indicate a wider charter being associ-

<table>
<thead>
<tr>
<th>Activity</th>
<th>Provided</th>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote scholarship of teaching and learning</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>Assist in planning and policy development</td>
<td>74</td>
<td>90</td>
</tr>
<tr>
<td>Advice on learning and teaching in higher education</td>
<td>68</td>
<td>79</td>
</tr>
<tr>
<td>Promote research in learning and teaching in higher education</td>
<td>63</td>
<td>79</td>
</tr>
<tr>
<td>Training in use of ICT/e-learning</td>
<td>63</td>
<td>79</td>
</tr>
<tr>
<td>Design of online learning materials</td>
<td>53</td>
<td>58</td>
</tr>
<tr>
<td>Post-grad course in learning and teaching in higher education</td>
<td>53</td>
<td>79</td>
</tr>
<tr>
<td>Engage in planning and policy development</td>
<td>53</td>
<td>90</td>
</tr>
<tr>
<td>Administer student feedback on teaching units</td>
<td>37</td>
<td>63</td>
</tr>
</tbody>
</table>
ated either with flexible or distance education or with research. The nature of their engagement with learning and teaching appears more aligned to the ‘strategic’ category, referred to in the section above, than to the ‘learning’ or ‘teaching’ categories. Their goals or mission statements indicate an orientation to the strategic approach. Most relate to assisting the university in fulfilling its strategic plan or goals relating to learning and teaching. Few of the units cite missions independent of their university’s central plan or strategy. Gosling (2008) reported:

Managers [of universities] often look to ADCs to produce policies because they are themselves under pressure from external (regional or federal) policies. These external pressures increasingly require ADCs to behave in ways that fit institutional priorities. The core elements expressed in the mission of the majority of centres whose directors responded to the survey were:

- supporting the institutions’ strategic goals;
- providing professional development of staff. Under this heading are included in provision of courses, mentoring, staff induction. A few mission statements specifically included management and leadership development; and
- facilitating learning and teaching initiatives to improve the quality of teaching and learning.

An alternative approach to determining ADC performance is to use external measures of success. External measures – such as university performance on the Learning and Teaching Performance Fund, the number of ALTC awards, citations, or grants received by members of the university, or new learning technologies – were cited by ADC directors as having a very high impact on their work. Few use internal measures such as the completion of professional development sessions or participation in graduate certificate programs in university teaching conducted by the centre.

While the ADC directors and academic developers report that publications on learning and teaching have the most influence on them, other topics that rate highly include staff development and organizational change. Many state journals relating to academic development generally influence them. These cover a range of issues in the development of higher education (Gosling, 2008).

Distinctions between what both ADC directors and academic developers rate as important, and the activities they actually engage in, suggest some

### Table 3
Survey of Academic Developers (n=53)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Provided</th>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote scholarship of teaching and learning</td>
<td>81</td>
<td>92</td>
</tr>
<tr>
<td>Assist in planning and policy development</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Advice on learning and teaching in higher education</td>
<td>88</td>
<td>91</td>
</tr>
<tr>
<td>Promote research in learning and teaching in higher education</td>
<td>73</td>
<td>95</td>
</tr>
<tr>
<td>Training in use of ICT/elearning</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Design of online learning materials</td>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>Post grad course in learning and teaching in higher education</td>
<td>40</td>
<td>82</td>
</tr>
<tr>
<td>Engage in planning and policy development</td>
<td>63</td>
<td>88</td>
</tr>
<tr>
<td>Administer student feedback on teaching units</td>
<td>11</td>
<td>55</td>
</tr>
</tbody>
</table>
disjunction between the priorities of academic development professionals and institutional practices. ADC directors and academic developers are generally not opposed to taking a strategic approach (and they rate the current external and internal environments, which support a strategic approach as favourable), but they would like to have more input in determining priorities. They also think that it is important to emphasize the professional development of academic staff, evaluation and review activities, curriculum development, and research and scholarship than is currently the case. The data in table 4 indicates that ADC directors see that matters relating more directly to the development of academics as teachers and to curriculum development are underprovided against matters relating to institutional strategic interests.

Table 4 represents the number of respondents who rated the activity as very or moderately important against the number who said the activity was provided to a great or moderate extent.

This is not to say that a strategic approach to academic development has led to a diminished focus on learning and teaching in universities. On the contrary, learning and teaching performance and/or involvement in the scholarship of learning and teaching are now likely to be explicitly valued in academic promotion policies and in performance review procedures. In addition, most ADC directors and academic developers are engaged as academics rather than as general staff, indicating recognition of this area as academic. The issue is the extent to which these developments are driven by an informed concern with development of learning and teaching rather than a concern with strategic positioning of institutions.

**Conclusion**

The question I addressed in this paper was how does academic development relate to teaching? A functional answer and a qualitative answer are proffered.

On the functional side, the data available suggests that organizational units associated with academic development often perform a range of functions that go beyond the development of learning and teaching. Activities in which they also engage include: educational media production and support; provision of student study skills programs; leadership and management development; preparation for external teaching awards; student evaluation of teaching and working with quality assurance measures; and contributing to the broad policy environment of a university and to its strategic directions.

On the qualitative side, I return to the differ-

<table>
<thead>
<tr>
<th>Activity</th>
<th>Difference</th>
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<tbody>
<tr>
<td>Professional development for postgraduates who teach</td>
<td>13</td>
</tr>
<tr>
<td>Support for staff identified as having difficulties with their teaching</td>
<td>10</td>
</tr>
<tr>
<td>Map and embed graduate attributes/generic skills across curricula</td>
<td>9</td>
</tr>
<tr>
<td>Peer observation and review of teaching</td>
<td>9</td>
</tr>
<tr>
<td>Assist with course/program and/or unit/subject reviews</td>
<td>8</td>
</tr>
<tr>
<td>Assist in development and design of new courses</td>
<td>8</td>
</tr>
<tr>
<td>Administer learning and teaching in higher education resource collection</td>
<td>8</td>
</tr>
<tr>
<td>Project-manage curriculum development projects</td>
<td>8</td>
</tr>
<tr>
<td>Produce/contribute to good practice newsletter</td>
<td>8</td>
</tr>
</tbody>
</table>
ences between teaching-oriented, learning-oriented, and strategically-oriented approaches to academic development (Table 1). The categories are not exclusive but information supplied by ADC directors and academic developers through surveys and focus groups suggests that the current orientation of academic development in Australia is, in the main, strategic. While the input of academic developers to universities may be informed by their understanding of learning and teaching in higher education, the agenda and measures of success are determined by institutional priorities – an area in which ADC directors would like to have a greater say than they currently do. In that sense, the potential for academic development to operate with the integrity of a practice informed by a disciplined study of learning and teaching is more limited than it was during periods where understandings of learning and teaching drove the enterprise. The current approach is instrumental and geared to performance measures rather than to the enhancement of learning per se.

Acknowledgements

The author acknowledges the contributions of all involved in the DAHEF project, particularly the reference group – Sharon Parry, Yoni Ryan, Allan Goody, Margaret Hicks, and Lynne Hunt – along with the research contributions of David Gosling and Jenny Bird.

References


Biography

Peter Ling is an Associate Professor and the Associate Dean in Swinburne Professional Learning at Swinburne University of Technology, Melbourne, Australia. Peter has performed as principal researcher in several national projects including *The Development of Academics and Higher Education Futures*, Australian Learning and Teaching Council, 2009.
Improving the Outcomes for College Students 
Transferring to University

Irene Carter, James P. Coyle, & Donald R. Leslie
University of Windsor

The authors discuss the challenges of transferring from college to university programs. Following consideration of the practices associated with transferring credits and creating articulation agreements, the authors suggest the use of learning outcomes. Noting the challenges, as well as the benefits, they propose using learning outcomes as an alternative to existing transfer practices. Continued collaborative research and planning efforts between colleges and universities are stated as being essential to improving the transfer process.

Introduction

This essay considers the use of learning outcomes as a way of improving the results for college students seeking admission to four-year university programs. Both colleges and universities face issues involving the transfer of credits from colleges to universities. Colleges deliver two- and three-year diploma programs with applied focuses, while four-year university programs place their emphasis on the development of theory and research skills. Upon graduation from college or after gaining work experience, students often aspire to raise their professional status by seeking to obtain a four-year university degree. This process frequently results in frustration due to confusing transfer policies and disappointing transfer credit results. The policies and processes that are employed in transferring credits from college to university programs clearly needs improvement, and using learning outcomes presents a viable alternative.

Confusing and Frustrating Transfer Policies

When moving from high school to institutions of higher learning, students often choose colleges over universities because they view colleges as a stepping-stone into universities. Colleges often have more affordable tuition levels, require lower grades for
admission, are geographically more accessible (Andres, 2001), and offer the opportunity for part-time studies (Cohen, 2005). In addition, students may see college education as a clearer path into the employment market. Universities recognize the academic achievement of college students by offering transfer credits. Students wishing to transfer to universities experience frustration when the transfer credits offered by universities differ between institutions and programs. Some of the reasons for these confusing inconsistencies are:

- Four year university programs specify that entering high school students must have completed a set number of advanced-level high school credits on entrance to university. When a college student is found to lack these high school credits, the university uses the student’s college credits to fill this gap (Bell, 1998).

- Degrees obtained from some specific institutions result in lower levels of credits because their degrees are considered to have less value (Marshall, 2005/2006). For example, in Canada, where colleges are not members of the Association of Colleges and Universities in Canada, students receive fewer transfer credits.

- Colleges viewed as technical schools result in lower transfer rates (Cohen, 2003). However, higher rates result when universities perceive colleges to be feeder schools (Cohen, 2005).

- Individuals who worked in their field between college graduation and their return to university often experience obstacles when transferring credits. For example, many of these individuals did not take the needed college courses for a successful transfer to a four-year institution (Knoell, 1996; Findlen, 1997/1998).

Even in institutions with strong transfer policies, students report improper implementation of those policies. Some universities continue to favour their current undergraduate students by using enrolment caps and asking college transfer students to reapply to the institution in order to continue their studies. In addition, universities deny credits based on college reputation rather than on articulation policy (Moodie, 2007).

The Role of Articulation Agreements

Articulation plays a key role in resolving transfer inconsistencies. Thompson (2003) defines articulation as “the process of formally defining how course credit and/or programs earned at one institution will be applied towards credit and/or a degree from another institution” (p. 4). Whether or not a college student transferring to university receives advanced standing depends on assessing the student’s college credits against the courses applicable to his or her university program. All Canadian post-secondary institutions use transfer agreements. However, only British Columbia and Alberta have developed province-wide councils with transparent policies that promote mobility between colleges and universities (British Columbia Council on Admissions and Transfer, 2003; Dennison, 2000). The Council has also developed procedures such as online transfer guides that hold institutional articulation committees more accountable for their actions.

Despite some improvements, Andres (2001) found that many students seeking transfers continue to experience confusion. Students report that information provided by universities is inaccurate, inconsistent, out-of-date, overwhelming, and that it often results in miscommunication. As in Canada, many universities in the United States reject credits from colleges even though many of the college courses are comparable to university courses (Miller, 2007). Rejection may occur despite comparable course content, use of the same textbooks, having a teaching faculty with similar qualifications, and providing similar learning experiences. To address these confusing transfer practices, Cohen (2003, 2005) suggested a further simplification of the transfer process for students who begin their post-secondary studies in college and then transfer to university. Handel (2007) suggests that the achievement of a successful transfer from college to university depends on the following:
• setting up suitable university preparatory courses and encouraging college students to focus on a major at an early stage in their education;
• communicating the positive aspects of successful transfers, such as financial aid and equal college and university student performance over four years of study;
• educating student advisors about transfer policies and procedures;
• carrying out articulation policies that help most students;
• giving college applicants priority in admissions;
• setting goals for college students, and addressing the needs of transfer students;
• establishing and promoting a ‘transfer-going’ culture;
• simplifying joint admission that increases access to university and raises the reputation of the colleges that open opportunities to share facilities (Knoell, 1996);
• considering past work experience as a basis for credit transfer; and
• creating a more collaborative model of articulation.

Using Learning Outcomes in the Transfer Process

Learning outcomes have great potential for assisting the transfer process. There have been a number of approaches for defining learning outcomes. Morin (2001) views learning outcomes to be that which we should know or display in ability. Another approach focuses on institutional power, responsibility, and accountability to uphold standards (Hubball & Gold, 2007). According to this view, curriculum alignment, curriculum assessment, and evaluation are at the core of a shifting definition from what is taught to what is learned (Hubball & Gold, 2007; Hill, 2007; Aviles, 2001a, 2001b). Learning outcomes, which describe knowledge and ability of students following completion of a course, replace learning objectives, which identify knowledge and skill-building that are taught in the course. In this essay, learning outcomes define new behaviours after a learning experience. They describe the knowledge, skill, and attitudes gained, and make up the overall integrated learning of a course or program (Daniel & McInnes, 2007; Kameoka & Lister, 1991). In a sense, learning outcomes constitute multiple levels of meaning related to accreditation, programming, and course design (Hubball & Gold, 2007).

Pragmatically, learning outcomes for courses or programs are characterized by an action verb, which is observable or measurable. Bloom's Taxonomy of Education in Undergraduate Teaching includes six levels of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation (Aviles, 2000; 2001a; 2001b). Bloom assigned several verbs corresponding to each knowledge level, rendering them useful for developing learning outcomes, as outlined in Table 1. In Bloom's Taxonomy used by Aviles (2001b), learning outcomes focus on the quality of undergraduate learning and become progressively more difficult.

Instructors create student learning outcomes and assign grades to student productivity in order to assess learning. Successful completion of courses would indicate attainment of learning outcomes. An outcome-focused course challenges instructors to identify a measurable link between course content and student knowledge or skills following the course. It may also require the development of better tools or assignments for evaluation. Yet, educational governing bodies have started to ask institutions of higher learning to demonstrate this type of learning (Ontario Ministry of Training, Colleges and Universities, 2008).

Hubball and Gold (2007) describe learning outcomes as learning-centredness, referring to a curriculum that is responsive to the needs and circumstances of students and to learning experiences designed with progressively more challenging courses. They offer an interconnected model of learning outcomes, explaining their various uses. These include teaching and learning, course design, faculty and cur-
Improving the Outcomes for College Students Transferring to University

Supports the role of learning outcomes as defining, delivering, assessing, and documenting student learning (Miles & Wilson, 2004). Thus, learning outcomes aid institutions to carry out their programs, assess students and curriculums, and compare themselves as institutions to other institutions.

In transferring from college to university programs, the functions initiated by learning outcomes are paramount in the planning, integration, and success of students. Implementing learning outcomes allows for the communication of clear expectations to learners, instructors, and prospective employers. This is critical for student expectations with regard to making transfers: the instructors’ understanding of their students’ learning needs and employers’ confidence with regard to hiring qualified and experienced professionals.

The use of learning outcomes fosters opportunities for a smoother transition from college to university programs, benefiting both students and institutions. Although using learning outcomes in individual courses allows institutions to assess specific student learning, comparing outcomes for programs addresses all learning outcomes related to a program (Aviles, 2001b). For university program stakeholders, the use of learning outcomes promotes an objective benchmark for formative and summative assessment, as well as a prior learning assessment of students transferring to a university program (Hubball, Gold, Mighty, & Britnell, 2007; Miles & Wilson, 2004).

Suitable institutional practices promoting these opportunities are crucial for student planning, integration, and success.

Benefits in Using Learning Outcomes

Through the use of a systematic method for identifying the specific needs of certain groups of students, employing learning outcomes allows for comparison and promotes accountability. It meets transfer students’ learning needs, especially in disciplines where learning outcome data is scarce. For example, a review of U.S. MSW programs suggested that two-thirds of programs only use course grades to assess student learning outcomes (Kameoka & Lister, 1991). Learning outcomes provide a clearer communication of expectations to learners, instructors, and prospective employers and they better measure student success. Coordination and collaboration between programs of study in multiple institutions is one way to use learning outcomes. They are able to remove barriers and promote equity between the educational experiences of various and diverse students.

The use of learning outcomes further provides the opportunity to acknowledge varying student diversity in education backgrounds by promoting a smooth transition to university programs. For example, the primary feature of human service programs in

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>Action Verb</th>
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<tbody>
<tr>
<td>Knowledge</td>
<td>Define, identify, state, list, differentiate, discriminate</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Explain, translate, interpret, match, extrapolate</td>
</tr>
<tr>
<td>Application</td>
<td>Construct, choose, predict, demonstrate</td>
</tr>
<tr>
<td>Analysis</td>
<td>Distinguish, separate, organize, infer, classify</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Compose, formulate, create, produce</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Debate, judge, critique, assess, compare</td>
</tr>
</tbody>
</table>

(Adapted from Bloom as cited in Aviles, 2001b)
both colleges and universities involves a professionally designed mix of theory coupled with field practice. While the relative degree of this balance varies from program to program, an underlying focus on service provision is shared by all. Clearly defining learning outcomes, related to both theory and practice in human service programs, at both the college and university level, would serve to benefit the population of students transferring to gain university credits. This approach allows consideration for both the students' needs and circumstances by allowing recognition for previous course work and practical experience.

Using learning outcomes in progressively more challenging courses also contributes to improving student transfer outcomes. They may more clearly demonstrate a student's progress in academic and practical knowledge and skills. It is also possible to use teaching tools to bridge gaps in previous learning experiences, for example, using group work, self-reflection, and presentation to expand learning outcomes. Coordinating distinct and cohesive outcomes at the administrative level can improve guidelines for the transfer process.

Challenges in Using Learning Outcomes

Initiating a learning outcome approach requires overcoming a number of challenges. Miles and Wilson (2004) found that assessing learning outcomes is difficult, often relying on rubrics and matrices (Daz-Lefebvre as cited in Carducci, 2006). These rubrics attempt to define learning that occurs from a variety of methods. For example, learning outcomes may be accomplished in college human service programs that provide excellent experiential learning opportunities but lack extensive theoretical knowledge. Universities more often present theory and research and use multiple and various teaching and testing methods. These differences not only challenge transfer students' learning skills, but they depict the complexity and uncertainty of attempting to measure all types of learning in a learning outcome format. For this reason, learning outcomes are best used as a guide that describes learning rather than a method for standardized testing of learning.

In addition, faculty may need more time to prepare courses that use a learning outcomes approach since this demands a closer agreement between course content, assignments, and outcomes (Aviles, 2001a). These obstacles often make faculty and institutions resistant to using a learning outcomes model. Therefore, developing learning outcomes for courses and programs requires a collaborative effort between faculty and university administrators with a respect for academic freedom.

When college students transfer to university, they may be asked to make up absent theory and research courses. Methods for accomplishing this include offering a one-semester bridging program or a two-course for one direct entry program for college students. These transfer procedures attempt to ensure that students are prepared for the theory and research demands of university education. For students to be successful, colleges and universities must be proactive in bridging the identified gaps between their educational expectations (Miles & Wilson, 2004). Institutional collaboration requires using effective assessment tools, conducting self assessments, and resolving differences about how to measure learning outcomes. Additional resources required to accomplish this provide another challenge for ameliorating transfer credit frustrations (Miles & Wilson, 2004).

Moving Forward Collaboratively

Despite the obstacles, the appropriate use of learning outcomes can assist the process of credit transfers from colleges to universities. Collaborations between institutions of higher learning, deans, and faculty can help identify, develop, and evaluate common understandings of learning outcomes (Miles & Wilson, 2004; Hendriksen, Yang, Love, & Hall, 2005). This may lead to what Hubball and Gold (2007) call the transferability of learning, which encompasses progressive curriculum, alignment of educational programs, and research and training about learning outcomes in programs and courses. Collaboration between colleges and universities can potentially better meet transfer students' needs and improve higher
education options for all students.

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**Biographies**

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The Thin Line Between Civility and Incivility: Fostering Reflection and Self-Awareness to Create a Civil Learning Community

Zopito Marini
Brock University

Incivility is a critical, but under-examined aspect of teaching and learning. It has important implications for the academic success of students and the university as a whole. Bullying research offers a unique lens through which this type of anti-social behaviour can be understood with a view of developing intervention strategies. The exercises outlined in this paper will help professors gain valuable information about their students’ understanding of the continuum between civility and incivility. The potential results from this reflective exercise can be an exciting example of the benefits of classroom engagement, where the knowledge gained from participating students is reinvested into their classrooms, thus contributing to their own creation of a civil learning community.

Introduction

While civility is a major characteristic of campus life, given the changing social and cultural role of the university, with its multiple pursuits and the individualist nature of its occupants, civility cannot be assumed or assured. It is apparent that incivility is increasingly becoming an issue of concern for all the major stakeholders, including students, professors, and administrators because the belief that this type of behaviour has both a short and a long-term negative impact on everyone involved (Hirschy & Braxton, 2004). Civility can be defined as “the ability to act as a ‘citizen’ of a group and function in a positive manner so that individual engagement can benefit both the individual and the group” (Marini, 2007, pg. 1). According to Boice (1996), the occurrence of classroom improprieties is “more common than uncommon” (pg. 479), hence, there is very little doubt that the teaching capabilities of universities and the learning opportunities of their students are seriously reduced when incivility occurs in classrooms, seminars, and labs.

The purpose of this paper is to share the ex-
perience of developing a framework aimed at fostering understanding of incivility with a view to creating teaching environments that invite civility, thus nurturing the fragile teaching and learning process.¹ With this in mind, this paper has three specific aims, namely: 1) to outline a framework to systematically elicit example of behaviours along the incivility and civility continuum; 2) to create a better understanding of the link between incivility and other forms of anti-social behaviours, such as bullying; and 3) to build on these two frameworks to systematically identify incivility and make suggestions for fostering civility.

The Thin Line Between Civility and Incivility

Although the reasons for the increase in concern with incivility on university campuses may be complex, and not entirely understood, the manifestations and consequences of incivility are concrete and undeniable. For instance, incivility can range from minor annoyances like cell phones ringing during lectures or classes disrupted by loud conversations, to the serious consequences of discussions that turn into insults or the misuse of technology, to the very serious outcomes when threats and intimidation are used and safety becomes an issue. Thus, in terms of understanding its characteristics, it is probably more productive to conceptualize incivility as a continuum that runs from annoying to disruptive to dangerous comportment. Similarly, in terms of consequences, the experiences of incivility can affect a student’s academic and personal development, ranging along a severe continuum from short-term disengagement from a course to long-term unfulfilled educational goals (Hirschy & Braxton, 2004).

One of the major objectives in this type of exercise is to systematically elicit useful information in a group setting with students (or even instructors) to highlight how easy it is to cross the thin line between civility and incivility. In trying to foster specific reflection and self-awareness, I have designed guided group exercises that take participants through a number of focused reflections in a stepwise progression. Figure 1 illustrates the intersection of two continua; the vertical axis represents the continuum from civility to incivility and the horizontal axis represents the continuum of the progression of intentionality.

The development of Figure 1 has seen many versions and has occurred over a number of years, and

¹ This paper is aimed predominantly at helping professors in their efforts to foster civility in their classrooms. However, given the reciprocal and dynamic nature of civility, instructors may find the process of personally engaging and reflecting on these activities beneficial.
it is partly based on concepts related to the field of inviting education and the seminal work of my colleague John Novak of Brock University’s Faculty of Education. While working on a monograph with him, I became quite interested in developing a visual representation of John’s central idea of providing an inviting educational environment (Di Petta, Novak, & Marini, 2002). At the time, I was teaching an introductory course in Child and Youth Studies, thus, I attempted to express the ideas on a graph using the vertical axis to indicate the degree of ‘inviting’ and the horizontal axis to indicate the degree of ‘intentionality.’ I used the Figure in my class of over 600 students to focus discussion on each of the quadrants. More recently, when looking for a depiction that would allow me to foster reflection on the thin line between civility and incivility, I returned to this design where I kept the intentionality on the same axis and used the vertical axis to represent the continuum between civility and incivility.

Fostering reflection on the two continua involving civility and intentionality

Depending on the course (or the purpose of a particular presentation), the content of Figure 1 can be engaged in a number of ways. Obviously, it would be quite appropriate to divide the audience into four groups and assign a roughly similar number of participants to each quadrant, allow them time to generate and discuss concrete examples that reflect the focus of the assigned quadrant, and ask each group to report to the entire audience. One of the effects of calling on groups to report in chronological order, from 1 to 4, is that the audience engages in a journey, beginning with the worst possible type of behaviour, characterized by deliberate and intentional incivility (which is the most undesirable), and ending with the behaviour represented in quadrant 4, characterized by intentional civility (which is the most desirable). Thus, responses from quadrant 1 may be characterized by cruel and demeaning comments aimed at hurting someone’s feelings, such as: “What is wrong with you? You can not be that dumb!” Responses from quadrant 2 may spring more from thoughtlessness than an aim to hurt. Thus, items in this quadrant could involve making fun of someone’s situation without knowing the person’s circumstances, such as exemplified in a statement: “You know, only those kinds of people wear those close.” Responses from quadrant 3 are characterized by a manifestation of civility where the person performing the act may do so routinely, and not be aware of its impact, such as: “Opening doors on the way into a lecture.” Finally, responses from quadrant 4 are characterized by purposefully matching the right behaviour to the right situation. In other words, the person knows why a civility act is necessary as well as its possible impact, such as “Helping an older student pick up books they just dropped, even if you are going to be late for class.” While some students may find differentiating between the quadrants challenging, it is worth reiterating for them that quadrants 2 and 3 are populated by acts high in intentionality, behaviours in quadrants 2 and 3 are more accidental in nature.

The result of engaging the audience through Figure 1 provides a rich and varied list of acts of civility and incivility, which can then become material to be identified and built upon to eventually provide suggestions for intervention. However, as part of the process it is important to also reflect on the difficulties encountered in generating examples in each quadrant and just as important appreciate how “thin” the line is between the quadrants. To help categorize and make sense of the responses generated using Figure 1, the facilitator may use the framework outlined in the next section.

Understanding of the Links Between Incivility and Bullying

One way to understand the slippery slope of incivility and other anti-social behaviours, such as bullying, is to outline some of the major findings of the bullying literature and highlight the potential links between incivility and bullying. An example of a possible conceptual bridge between incivility and our research on bullying is in the definition we use, which highlights the repeated and systematic use and abuse of power involved in bullying to obtain instrumental and social goals (Marini, Dane, Bosacki, & YLC-CURA,
In a previous work (Marini, 2007), I argued that it seems plausible to suggest that the area of study related to civility could benefit from research contributions grounded in related cognate fields of study particularly those pertaining to the general area of interpersonal conflicts, antisocial behaviour and aggression, such as the systemic aggression manifested in bullying. Thus, it seems that the bullying literature can be quite informative on this aspect of incivility by placing it in the larger continuum related to anti-social acts. A critical concept to keep in mind is the idea that many acts of incivility are subtle and easily dismissed as not a ‘big deal.’ However, extensive bullying research makes clear that, if allowed to persist, incivility can slowly undermine the necessary social fabric needed for group functioning (Lim, Cortina, & Magley, 2008).

Aspects of bullying that can contribute to the understanding of incivility

Bullying is a sub-type of aggression aimed primarily at harming the relationship between peers (Marini et al., 2006; Pepler, Jiang, Craig, & Connolly, 2008) and, while a comprehensive examination of the vast bullying literature is outside the scope of the present paper, a number of central issues will be used to inform our understanding of incivility, including: 1) the predominant focus on the physical aspects of bullying; 2) the lack of understanding of the heterogeneous nature of bullying; 3) the serious underestimation of the pervasiveness and impact of indirect types of bullying; 4) the short and long-term consequences

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**A) Forms of Attack**

**Manifestations of Bullying**

*How is bullying carried out? or, what does it look like?*

- **Direct** ➞ Overt confrontations, involving physical & verbal attacks
- **Indirect** ➞ Covert attacks, harming others by manipulating peer relationships

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**B) Function of Attack**

**Goals of Bullying**

*Why is bullying carried out? or, what is the motivation?*

- **Reactive** ➞ Defensive attacks, frustration driven, hostile expressions (i.e., reaction to perceived provocations)
- **Proactive** ➞ Predatory attacks, unprovoked, goal-directed (use of aversive acts to obtain instrumental and social goals)

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**C) Types of Involvement**

**Roles Played in the Bullying**

*What role does the individual have in bullying?*

- **Single role** ➞ Bully, Victim and Bystanders
  - **Passive** ➞ **Active** ➞ **Aggressive**
- **Dual Role** ➞ Bully/Victims

Marini et al, (2006; in press)

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**Figure 2**

*Multidimensional Bullying Identification Model*
of this type of meanness; and 5) most importantly, the failure to appreciate the transformation of bullying to fit in different settings such as the world of academia. A particularly valuable distinction borrowed from the bullying literature (Marini et al., 2006; Marini, Dane, & Kennedy, in press), which focuses on the forms, functions and types of involvement, is illustrated in Figure 2.

Forms of bullying
A persistent notion has been that typical bullying behaviours involve predominantly physical and other overt acts, such as verbal aggression. Nothing could be further from the truth. In fact, once the myth of the exclusive use of physical aggression was put to rest, researchers began to take a serious look at other forms of bullying (Leenaars, Dane, & Marini, 2008; Vaillancourt, 2005). As a result, and to the surprise of many people, a number of other types of bullying have been identified. One of the common characteristics of non-physical types of bullying is the fact that they are committed, largely, in a covert manner. Thus, this type of bullying can be classified under the umbrella of “indirect” bullying, which encompasses a large number and types of harmful behaviours that may include social, relational and, most recently, cyber bullying, usually carried out in the absence of the victim, and in many cases, out of the view of others. Indirect bullying tends to afford the victimizer some anonymity and increase the likelihood of escaping detection. The current thinking on the best way to capture the forms of bullying makes use of a juxtaposition of direct and indirect bullying.

Function of bullying
The second dimension of bullying is the function it serves for the perpetrator. Central to this aspect is the concern related to the understanding of the motivation for students to engage in bullying. In other words, why do students bully others? Finding an answer to this question is of fundamental importance, for it can have an impact on the type of intervention we may put in place. While the motives may be many and complex, usually they can be parsed out into two major categories; namely, reactive and proactive. As shown in Figure 2, students are likely to become bullies because they react to a “perceived” hostile act directed towards them, even if the originator of the act does not mean to cause harm. An example of reactive bullying is likely to take place in the middle of a class discussion on a potentially volatile topic such as poverty, euthanasia, or racism. In the heat of a spirited discussion, words may be said in an unreflective manner, causing a sensitive person to overreact and retaliate. In contrast, proactive bullying is planned and calculated, does not involve hostility, and is usually directed to acquire rewards in the form of goods or social status.

Types of involvement
The involvement can range from single to multiple, and from passive, to active, to aggressive. For instance, there may be students who are purely victims or bullies, while others are both. Similarly, to revisit the continuum of incivility mentioned above, a distinction can be made between those students who are passively uncivil, for example reading the newspaper in class, to those who are involved more actively, such as those who talk during lectures, and finally to those students who are uncivil in an aggressive manner, such as those who publicly and loudly question the fairness of a grade received in an assignment.

Design for a Civil Learning Community
Engaging Figure 2 facilitates the building of conceptual bridges between incivility and bullying that can extend beyond the anti-social similarities of the two concepts and to sustentative comparisons related to the “form” (e.g., type) and “function” (e.g., motivation) of the two behaviours. For example, our understanding of incivility could be considerably enhanced by making a sharper distinction between various types of incivility, and between acts of incivility committed overtly and those carried out covertly. Furthermore, it would be informative to differentiate between uncivil behaviours that arise because of reactions to a “perceived” provocation, those that arise
unintentionally, and those that are planned and intentional.

Preparing for intervention
To the extent that it is possible, it would be beneficial to pull together the responses generated from engaging Figure 1 and to invest some time to categorize them using the template in Figure 2. In other words, it would be constructive to see how each of the following categories are represented, including: 1) forms (direct vs. indirect); 2) function (reactive vs. proactive); 3) types of involvement (single vs. dual, and passive, active vs. aggressive); and 4) severity: low (annoying), mid (disruptive), and high (dangerous).

Overall, these distinctions are noteworthy for they may help to point the way towards general intervention strategies. For instance, while direct and reactive incivilities can be usually addressed by instructional and behavioural interventions, which may include explicit statements addressing the issue, other acts of incivility, such as those carried out indirectly and are planned (e.g., covertly provoking a sensitive student), need to be addressed by different means that include the fostering of good learning relationships between students and between students and their instructors (Marini & Dane, 2008; Marini et al., in press).

In addition to the general intervention just mentioned, in terms of more specific and targeted strategies, it is beneficial to distinguish between disruptive classroom behaviours that spring from a lack of knowledge of the rules and norms expected in a lecture (e.g., students do not know any better) from acts of incivility that arise because of a lack of self-control, where students may react to perceived provocation (e.g., the classical overreaction to a comment one does not agree with). In case of the former, a well-structured syllabus clearly outlining the expectations of the course will go a long way in preventing much of this type of incivility. In the latter case, engaging students in a discussion of civility culminating in a ‘shared statement of civility’ may go a long way in establishing and nurturing relationships with other members of a civil learning community, making sure that a class, seminar or lab runs smoothly, even under difficult circumstances.

References


Biography

Zopito Marini is a developmental and educational psychologist, and a Professor of Child and Youth Studies at Brock University in St. Catharine’s, Ontario. His dedication to his students and his commitment to the development of innovative pedagogy has received many awards, including: The Brock University Award for Distinguished Teaching and the OC-UFA Teaching Award.
Dossier de Progression et Dossier de Réussite: Deux Outils Complémentaires au Service de la Professionnalisation Enseignante dans le Supérieur

Marianne Poumay et François Georges
Université de Liège, Belgique

Cet article aborde et illustre les notions de référentiel de compétences, de dossier de progression et de dossier de réussite (Tardif, 2006) tels qu’ils sont mis en œuvre au sein du programme Formasup, master complémentaire en pédagogie de l’enseignement supérieur organisé à l’université de Liège. Les auteurs présentent l’articulation interne de ce programme qui cible un nombre limité de compétences critiques, accompagne le développement de ces compétences chez les enseignants participants et mesure ce développement à travers un portfolio. Ils discutent enfin des défis et difficultés qui persistent ainsi que des moyens mis en place par l’équipe encadrante pour tenter de les surmonter.

Introduction

Dans l’enseignement supérieur, nombreux sont les dispositifs de formation innovants, qui tentent d’harmoniser les intentions et les actions, renforçant la cohérence entre les compétences visées, les méthodes mises en œuvre pour développer ces compétences et la façon dont ce développement de compétences sera évalué. Cette « triple concordance » entre objectifs (parfois rédigés en termes de compétences), méthodes et évaluation - qui favorise l’apprentissage et, en corollaire, la réussite des étudiants - est déjà complexe à installer au niveau d’un cours. Elle l’est encore davantage au niveau d’un programme entier de formation.

« Formasup », le master complémentaire en pédagogie de l’enseignement supérieur de l’ULg, tente de mettre en pratique cette concordance entre visées et outils.

Les principes de Formasup

Dans Formasup, les enseignants du cycle supérieur sont en réflexion sur leur pratique. Chacun mène son propre projet, vit des situations d’apprentissage...
variées, bénéficie de supports en ligne et participe à
deux semaines de regroupement présentiel par an,
eci durant deux années. Tout au long de ces deux
années, même si les rencontres sont rares, la progres-
sion est très encadrée grâce à des « accompagnateurs
» individuels (pour plus de détails sur cette forma-
tion, voir Poumay 2006 ainsi que le site informatif
ci-dessous).

Le master est fondé sur les principes du « 
Scholarship of Teaching and Learning » (SoTL, Kre-
ber 2002) : les enseignants participants sont appelés à
documenter leur pratique et à innover dans leur pro-
pre enseignement en y menant une réelle recherche.
Celle-ci nécessite des analyses de données subjectives
(ex. analyse des avis de leurs étudiants) mais aussi
objectives (ex. analyse des notes obtenues pour des
travaux, traces d’apprentissage en ligne), et doit im-
pérativement servir l’apprentissage de leurs étudiants.
Ils sont également tenus de communiquer sur leur
pratique, de partager leurs réflexions avec leurs col-
lègues et d’ainsi contribuer à la diffusion des savoirs
après avoir contribué à leur construction.

Formasup est aussi ancré dans le courant
de l’apprentissage visant le développement de com-
pétences. Il a été fortement affecté en 2006 par
l’ouvrage de Jacques Tardif qui propose une défini-
tion opérationnelle de la compétence et décrit des
outils (portfolios, cartes conceptuelles) qui facilitent
l’évaluation des étudiants en cohérence avec cette dé-
finition. Nous nous en sommes fortement inspirés
pour revisiter notre référentiel et consolider notre ap-
proche.

Les Outils Déployés

Comme l’illustre la figure suivante, basé sur un ré-
férentiel de neuf compétences à développer chez les

**FIGURE 1**

*Le site de présentation du master complémentaire Formasup, disponible à l’adresse [http://www.formasup.eu](http://www.formasup.eu)*
enseignants participants, Formasup met en œuvre un « dossier de progression » (Tardif, 2006) pour accompagner ces enseignants de façon étroite et un « dossier de réussite » pour évaluer le développement des neuf compétences visées.

Le référentiel reprend neuf des compétences inhérentes à la professionnalisation enseignante, qui sont développées au sein de Formasup. D’autres actions de l’enseignant mériteraient sans doute tout autant notre attention mais nous nous limitons à ce que nous pensons pouvoir développer et mesurer. Ces neuf compétences développées appartiennent aux domaines conceptuel (ex. formaliser ses savoirs d’expérience), pratique (ex. réguler en menant une recherche située) et réflexif ou relationnel (ex. faire preuve d’esprit critique et développer celui-ci chez ses étudiants). Elles résultent de la documentation de nos propres pratiques, mais aussi de nos régulations annuelles et de nos réflexions quant à la cohérence de nos outils. En effet, par exemple, pour répondre à la définition que donne Tardif (2006) de la compétence, il nous faut rendre possible pour chacune de nos neuf compétences une multiplicité de parcours d’apprentissage différents, une mobilisation et une combinaison de ressources propre à chaque enseignant participant, différente de celle de son collègue, et un apport de preuves du développement de cette compétence. Les compétences doivent en outre être

**Figure 2**

*Un référentiel et deux outils pour guider et évaluer le développement professionnel des enseignants du supérieur*
considérées comme critiques dans la profession enseignante. La plupart des compétences (voir ci-dessous l’exemple de la compétence « concevoir en visant l’apprentissage »), sont elles-mêmes décomposées en des constituants plus fins, de façon à baliser la progression des enseignants participants.

Pour soutenir le développement de ces compétences, le « dossier de progression » documente le parcours de développement de plusieurs d’entre elles. Il permet à chaque participant de dialoguer avec un accompagnateur personnel tout au long de la conception de la nouvelle mouture de son cours (au sein de son groupe classe) et de sa question de recherche. Ce dossier est informatisé, le dialogue est donc instrumentalisé. L’organisation asynchrone est adaptée aux contraintes des enseignants participants. Dans ce dossier interactif, l’enseignant participant communique des preuves de son degré de maîtrise des nombreuses ressources propre à la formation. Pour structurer son travail, une dizaine d’items ont été isolés et illustrés de théorie et d’exemples. Son accompagnateur lui fournit sur sa production autant de feedback qu’il le souhaite. La fonction principale de cet accompagnement consiste en un soutien à l’apprentissage mais la fonction de soutien affectif des participants est elle aussi bel et bien présente.

En organisant une auto-évaluation permanente et assistée, cet outil d’accompagnement constitue un puissant levier de prise de conscience par chacun de son apprentissage. Par ailleurs, par l’aspect diagnostic des interactions avec les accompagnateurs, l’outil fournit à chacun des données utiles à son auto-régulation permanente.

En fin d’année, le « dossier de réussite » rassemble les preuves du développement professionnel de chaque enseignant. Il demande à l’enseignant participant de décrire son parcours en tant qu’enseignant, de souligner les valeurs qu’il véhicule ainsi que les grands tournants pédagogiques de sa carrière, de décrire son action innovante et la recherche qu’il a menée au service de l’apprentissage de ses étudiants, de fournir des preuves de cinq critères de qualité de son enseignement (suivant les « Prompts for good practice » de l’association HERDSA) et de décrire les perspectives de son développement professionnel. Ce portfolio fait l’objet d’une évaluation par trois membres d’un jury. Les décisions quant au degré de maîtrise des ressources et au niveau de développement de chaque compétences se prennent donc collégialement. L’accompagnateur de chaque participant ne

![Figure 3](image.png)

**Figure 3**

Décomposition de la compétence « concevoir en visant l’apprentissage »
fait pas partie de ces trois juges mais il est présent lors de la délibération et fait parfois valoir des arguments en faveur du participant. De type holistique et orienté recherche, le portfolio vise pourtant également à valoriser l’enseignant participant en lui offrant la possibilité de communiquer sur sa pratique. La constitution de ce dossier est largement facilitée par le parallélisme entre les deux instruments : progression et réussite portent sur une série de critères communs repris dans le référentiel de compétences, fil rouge de la formation.

Discussion et Perspectives

Vu l’exigence de ce diplôme, qui demande à chaque enseignant un considérable investissement en temps et en énergie ainsi qu’une performance finale (le portfolio, ou dossier de réussite) d’un niveau très élevé, deux ingrédients nous semblent indispensables : un accompagnement très étroit et une cohérence du programme.

L’accompagnement, comme nous l’avons souligné plus haut, constitue à la fois un soutien à l’apprentissage et un soutien affectif. Individuel et rapproché, il est d’ailleurs considéré par les participants comme l’un des points forts du programme. La cohérence entre le référentiel, le dossier de progression et le dossier de réussite est absolument nécessaire pour que les enseignants perçoivent l’intérêt des tâches à réaliser, des séminaires proposés et des ressources présentes en ligne. Ces professionnels qui ont un emploi d’enseignant à temps plein ne peuvent dégager du temps que s’ils sont convaincus de l’intérêt de ces efforts pour la qualité de leur enseignement. La cohérence de notre offre de formation doit être rapidement perçue par chacun, de façon à favoriser la persévérance.

Cette cohérence a beau se renforcer d’année en année, l’architecture de base du programme a beau nous sembler fondée sur des principes aujourd’hui bien documentés en pédagogie universitaire (SoTL, compétences, professionnalisation enseignante), des progrès restent à faire et notre équipe encadrante est toujours en réflexion. Nous constatons par exemple une difficulté récurrente de nos participants à toujours bien sélectionner leurs actions en fonction de leur sens. Choisir de mener une action qui répond réellement à l’une de leurs difficultés en classe, mener une recherche qui serve effectivement l’apprentissage de leurs étudiants, orienter leur réflexion vers les éléments les plus critiques de leur pratique sont autant d’actions qui sont loin d’être intuitives chez tous les enseignants.

Pour les aider dans cette voie, nous aimerions leur proposer une gestion des « paliers », des niveaux de développement de chacune des compétences ciblées par notre référentiel. Ces niveaux prendraient clairement en compte cette notion de sens des actions, tellement importante en développement professionnel.

**Figure 4**

*Première tentative de définition de paliers de développement pour les compétences du domaine conceptuel*
Nous voyons ces niveaux de développement comme autant de guides à l’auto-estimation des progrès des enseignants.

Ces paliers sont malheureusement très complexes à établir. Nous nous y attachons, nous en approchons certains, mais il nous faudra sans doute encore plusieurs années pour déterminer précisément ces repères qui serviraient l’accompagnement et le développement. A titre d’illustration, la Figure 4 reprend une première ébauche de trois paliers successifs, pour les compétences appartenant au domaine conceptuel.

Pour établir ces paliers, nous avons analysé les dossiers de progression et les dossiers de réussite des deux dernières cohortes d’enseignants de Formasup. Depuis 2008, nous ajoutons à ces analyses un questionnement des participants qui, à quatre reprises sur l’année, nous donnent des indications sur leur perception de paliers critiques dans leurs compétences et des éléments qui ont été les plus déclencheurs de ces sauts qualitatifs. Notre hypothèse est que connaître ces paliers va aider les enseignants à prendre conscience, puis à se rapprocher de ce que nous considérons comme le niveau le plus élevé de professionnalisation enseignante au regard des quelques compétences sélectionnées.

Sans doute des collaborations internationales entre équipes constituerait-elles un facteur d’accélération de ces réflexions et de qualité de leurs résultats. Il serait utile de comparer tant nos méthodes de recueil de données que nos résultats – les paliers – et la façon dont nous en tirons parti pour améliorer nos programmes.

Références


Biographies

Marianne Poumay est professeure à l’université de Liège et directrice du LabSET-ULg. Cette équipe de 35 personnes étudie l’apprentissage, en particulier dans un contexte d’usage de technologies. Marianne est à l’initiative du master complémentaire Formasup, qu’elle s’attache à faire évoluer au fil des ans, tel un laboratoire de principes et méthodes d’accompagnement des enseignants dans leur professionnalisation.

Section II

Enhancing Practice in a World of Learning
My (Gail’s) decision to teach a class using a problem-based learning format required taking a closer look, with the aid of our Centre for Teaching, Learning, and Educational Technology, at group work and how to manage it in a way that encouraged and reassured students, and also stayed true to the basic tenets of problem-based learning. This comment from a student in my class seems to summarize the feelings of many students:

I enjoy a course where I am required to attend class, and complete assignments on my own and during my own time. I have a hard time relying on others to contribute fully to group assignments, as I have had bad experiences in the past. I like to complete assignments on my own so that I know they will be done properly and handed in on time.

Do students’ concerns about group work reflect a genuine preference for another style of learning, or are they actually the result of past experiences with poorly managed groups? It has been helpful for me to take the time, at the beginning of a course, to have students identify their preferred learning environment and learning strengths. Surprisingly, many students have not thought about this in an organized way. This can be done by using inventories or...
questionnaires designed specifically for this purpose, such as the Kolb Learning Styles Inventory or the VARK Questionnaire (Kolb, 1984, 1999; Fleming & Baume, 2006). Expand on this exercise by having students place themselves on a line representing the continuum between lecture-based classes on one extreme to small group, participatory classes on the other. Ask them to explain why they placed themselves where they did, emphasizing that there is no right answer to this exercise. Lecture-based courses with a reading list, midterm, and final exam are ‘safe’ for those students who are fearful of not knowing the answer if they are called upon. With group work, problem-based learning may be seen as threatening and intimidating.

Have students write about whether they agree or not with the results of the learning strengths inventory or questionnaire. They will need to give some thought to their own learning preferences to be able to agree or disagree. When these activities are done before forming groups, they help students to appreciate the diversity of thoughts and actions, which will undoubtedly be present in their group, and understand that this can be an advantage when working on a problem together, as it guarantees different points of view.

Many of the management issues related to group work centre around accountability, i.e. is everyone doing their share of the work? Using a ‘log book’ to keep a record of group meetings can be helpful. Have students record the date and time of meetings, who was there, who was late, who sent regrets, and who was absent without notice. Have group members check in and share news or information. Review the minutes from the previous group session and address old business by having students update what they’ve done or found since the last meeting. Address new business and what must be done next, by whom. Set timelines. Determine the next meeting time and place. End by giving everyone a chance to make a last comment or suggestion. The log book helps to support or refute complaints from group members about another member not ‘pulling his/her weight.’ It also provides a record of each member’s responsibilities for the next session, for example, information to be found, person to be contacted, or data to be checked. Use roles such as facilitator, recorder, mood minder, and time keeper to organize the group sessions and provide a way for quiet or shy students to participate. The ‘voice’ of their role will gradually be replaced by their own voice, sharing more of their own ideas as they gain confidence within the group. Rotate the roles for each meeting.

The log book can be used to record and store material relevant to solving the problem; however, a recent experiment using on-line Wikis (a website that allows visitors to make contributions or corrections) for each group has shown me that this option may be better. Students can add material to the Wiki any time that they are on-line, and they like the idea of being able to work on their own schedule. It’s possible to monitor individual contributions to the Wiki and this can serve as a means of assessing participation. Strategies like the log book and the Wiki make distribution of work and accountability for work done more transparent to all group members. When supplemented by the information about learning styles, group members can also come to appreciate the different pacing and processing preferences of each group member and deal with them as learning preferences rather than deliberate avoidance and sabotage of the group task. Once group members realize that tasks can still be completed, even though the means to completion may be varied, they are more likely to trust each other and be less anxious about having to control everything. This can also lead to more creative and resourceful problem solving and thinking relative to the task.

Group work can also involve end products that are non-traditional. I (Maureen) give a group-based assignment I call ‘not a paper.’ It can be any format as long as it can be shown as an interactive display and is not text dominant. Here, students pool different talents, competencies, and ideas to create a product different from their regular presentation and paper-based formats. I have seen everything from dramatic performances to puppet shows, sculpture to dance, websites to talent cafés. I am always delighted by the ways students can learn to run when there is an open space before them.

In my (Gail’s) class, students complete two evaluations at the end of term. Each group evaluates
the presentations of all the others, using a grading template and giving specific feedback, which is elicited by asking the group to complete two phrases: “One good idea from your presentation was…” to encourage positive comments and “Did you consider…” to encourage constructive criticism. The second evaluation has each student complete an anonymous within-group distribution of marks form to tell me how to split up the mark their group has earned among the group members. This anonymous evaluation assesses contributions in three areas: discussion/planning/decision-making, information gathering/explanations, and presentation contribution. Other approaches to assessing group work include anonymous peer and self evaluation submitted by writing a letter to the instructor. Group assessment is also an intriguing format, especially in an ‘in class, single use’ activity. An example from my (Maureen’s) class in developmental games involves the following: all 36 students in the class indicated distaste for the usual presentation of a game that they work on as a group outside of class time, in order to present it in class to their peers. I decided to get the whole experience – group selection, game selection, practice, and presentation into one, three-hour class period. Students arrived and drew a letter from a large envelope, which contained six A’s, B’s, C’s, D’s, E’s, and F’s. The similar letters formed a group of six. Each group sent an emissary to choose one game from one envelope, and another game from another envelope. The task was to create a hybrid game from the two chosen. All groups had an hour to plan and practice. Then, each group presented its hybrid game and was assessed. Students overwhelmingly supported this approach. They liked the random groups and game selection, the equal preparation conditions, and the fact that the assignment was finished within one class session. I have also used this format for written assignments with equal success.

We have shared several of our approaches to managing group work in the hope that it will encourage instructors to consider using group work in assignments and assessment. We hope that instructors will use our experiences to guide their decisions about planning, implementing, and monitoring group work with learner heterogeneity and transparent accountability in mind.

References


Biographies

Gail Frost is an Associate Professor in the Department of Physical Education and Kinesiology at Brock University in St. Catharines, Ontario. She teaches courses in musculoskeletal anatomy, prevention and care of injuries, and therapeutic exercise. Her research includes studies to: 1) assess the effectiveness of clinical rehabilitation interventions; and 2) implement problem-based learning in her teaching.

Maureen Connolly is a Professor of Physical Education and Kinesiology, is cross appointed to the Department of Child and Youth Studies, and is a contributing faculty member in the Centres for Applied Disability Studies, Women’s Studies, and Adult Education, and in the Faculty of Education at Brock University, St. Catharines, Ontario. She is presently in her last term as Director of the Centre for Teaching, Learning, and Educational Technologies. Her interests have led her to collaborate with community partners in a variety of teaching and scholarly projects, such as the Summer Movement Camp for children and youth with Autism Spectrum Disorder and the Special Needs Activity Program.
This essay draws on a case study and provides strategies for closer collaboration to enhance mutual understanding between face-to-face and open learning. The ways that students and faculty benefit from the team approach used in open learning course creation are outlined. Practical methods of adapting group work and other learner-centred classroom pedagogies to the print medium are also examined.

Introduction

Enrollment in open learning courses has seen an unprecedented rise over the last few decades. Formerly limited to a few specialized universities, its providers now number in the thousands worldwide (Calder, 1999). Registration in the Canadian Virtual University, an association of accredited universities specializing in online and distance education, has risen yearly by 10% since the consortium was created in 2000 so that, by 2006, it boasted 150,000 course registrations (Johnson, 2008). However, relatively few Canadian professors have more than passing familiarity with the model. Furthermore, teaching faculty frequently have deep reservations about open learning (Guri-Rosenblit, 1999). My own concerns were largely pedagogical (although, admittedly, territoriality and unfamiliarity played a role). As an initially reluctant writer of a first-year course on Indigenous literatures in Canada, I suspected my beliefs in Jerome Bruner’s (1996) “mutual learning cultures,” in which the teacher is “an enabler” (p. xv) and critical pedagogy’s emphasis on the humanistic elements of education (Fobes, 2005), were incompatible with the world of distance education. Particularly in a print-based course (where a television, telephone, and DVD player are the only electronic media a student could be presumed to access), designing such curriculum seemed contradictory to the theories and praxis I have embraced over three decades.

Two familiar models made open learning less alien. The traditional European model of independent study, which has been likened to distance education (Annand, 2007), typically has fewer class contact hours and assignments than the Canadian model, and pays less attention to students’ extracur-
ricular activities (Guri-Rosenblit, 1999). It, therefore, requires of students considerable self-motivation and de-emphasizes the social aspect of education. The nexus between open learning and service learning – which provides students with hands-on experience working with community organizations – may be less apparent. However, Annand (2007) also observes that distance (and, by extension, open) learning removes temporal and spatial constraints. Similarly, my students, who are enrolled in the stand-alone service learning model, can compact their placement or schedule their time around other activities, and sometimes work out of their homes, always moving beyond the four walls of a classroom. In sum, the traditional European model, service learning, and print-based open learning are connected by the special demands they place on, and the flexibility they afford, the learner.

Seeing open learning in this light, I accepted the position of course writer, from which I emerged with great respect for the team-writing model. As we worked to create an introduction to the themes, genres, terminology, and disciplinary approaches of literature, our collaboration netted assorted strategies – most adaptable to other disciplines – that enable and engage while respecting course flexibility and student independence. This paper presents a case study model to demonstrate that classroom practices can be adapted to open learning curriculum, and that the open learning team approach to course writing provides a model for face-to-face course development.

**Course Writing: The Team Approach**

The team approach not only keeps the course development on task, but it also affords stringent peer review beneficial to the quality of the product and the writer’s scholarly development. The team’s consultants (with teaching experience in open learning), advisor, and manager scrutinized my writing from theoretical and practical perspectives. If the team approach lessens the possibility of subjectivity (Annand, 2007), we were a model of objectivity.

After the course plan was written collaboratively, each team member sequentially provided extensive comments, suggestions, and practical observations on each subsequent unit I drafted. I then revised and submitted ‘finals’ which were further scrutinized and modified.

In the non-face-to-face situation, the challenge of satisfying all participants was ongoing and, because our communication was largely in writing, we received an exceedingly germane lesson in the necessity of thorough and precise expression. Patience, diligence, and compromise are required in the production of a course package that satisfies participants with diverse pedagogical philosophies and experiences as well as engrosses and challenges students.

**Course Commentary**

The course commentary is the curriculum team’s discussion and analysis of syllabus material. Its classroom equivalent is lecture and discussion. Although it is a tall order to replace the lecture/discussion when communication is fixed, one-way, and to an unknown audience, many techniques that are standard for face-to-face lecturing can be incorporated into the commentary. First- and second-person pronouns, appropriate humour (see Strean, 2008), relevant questions, (see O’Beirne-Ryan, 2008), analogy, and personal anecdote, for example, can reveal the writer’s personality, be inclusive, and in other ways, bridge gaps created by distance.

The collaborative nature of course creation allows for an additional approach to bridge distance and model the discourse of academic disciplines. Throughout the course, students are aware of the presence of the creative team. Eschewing the single voice of authority, we introduce ourselves early and use our numbers to illustrate the subjectivity of literary interpretation by providing supplementary or even contradictory analyses: one consultant challenged my analysis of a chapter in a novel, and the other consultant disagreed with my responses to a poem, and we included both responses. These exchanges exemplify disciplinary complexity and mimic classroom discussion. Rather than an omniscient presence dominating, a lively discourse occurs – a
strategy that can be modified for most subjects.

Sharing aspects of processes involved in course creation can further engage students. Most notably, we provide background to our decision on course naming. This approach can also reveal rationale – important for the students and their instructors.

Visual illustrations – simple or complex – acknowledge different learning styles, break up the print commentary, and give the course a human face. Properly explicated and integrated into the commentary, photographs of each author and production shots from each play studied, for example, add dimension.

Video components, a staple of open learning packages, should be enhancing and integral, rather than supplemental, to the course content; they should also transcend the ‘talking heads’ approach. Short clips, interspersed throughout the course and incorporated into the written commentary, are most effective. Our advisor’s clips reinforce course concepts, but also augment the written commentary by, for example, providing students with the experience of hearing languages used in some of the required readings.

Face-to-face interaction can be emulated through engaged and engaging voices in the commentary; varied print and electronic material can accommodate diverse learning styles; and the communal focus of the commentary can model disciplinary discourse and significantly enhance learner involvement.

Course Materials

Selection of appropriate, engaging course materials is particularly important in open and distance learning, as Guri-Rosenblit (1999) reminds us, “the venia legendi (the right to teach) is vested in the study materials rather than in the individual lecturer” (p. 25). Moreover, the use of the syllabus materials should be tailored to the open mode.

Although secondary sources may be used infrequently, if at all, in a first-year literature classroom, we theorized that requiring the students to read a considerable number of them is conducive to enhanced connection, as well as pedagogically important. In addition to developing critical thinking faculties and reading comprehension, this activity provides concrete research examples and exposes students to a variety of perspectives, thereby illustrating the subjectivity of literary response and encouraging essays that go beyond regurgitation of the commentary – another foundational pedagogy easily modified for other disciplines.

The secondary sources were selected to introduce students to diverse disciplinary writing modes – from conventional academic discourse through informal dialogue and personal narrative and journalistic work. Thus, students are exposed to the variety of voices they will encounter throughout their studies – in whatever discipline.

Moreover, materials considered as reference or recommended reading in face-to-face learning may assume greater importance in open education. While the equivalent to the English literary handbook is likely a feature of first-year courses in many disciplines, we integrated it to a greater extent than we would in the face-to-face situation: it was repeatedly referred to in the commentary and incorporated into activities and assignments. The preface to a required anthology forms the basis for a writing assignment because it is dialogic and therefore introduces students to a distinct form of written discourse, as well as emulating the orality that is the origin of some syllabus material.

Course writers should also consider, where applicable, including first-hand accounts that reveal the process behind the material studied. In our course, written and audio-taped accounts of the authors’ own insights into their work reveal the genesis of the work of literature and thereby personalize it; they also simulate the guest speaker of the traditional classroom. Creativity is requisite in selecting relevant materials and customizing their use to accomplish pedagogical objectives and promote engagement.

Course Activities

Course activities function as the equivalent to home-
work, but they can also simulate classroom activities. If they are clearly delineated, varied, and imaginative, students are inspired to complete them.

While some of our course activities are apparently standard in open education literature courses, such as keeping a journal and writing responses to questions – pedagogically sound activities in virtually all disciplines – we incorporated more of these activities than is usual. Further, practicalities usually result in open-ended (affective response) questions not requiring tutor input. These “low stake” questions make the student an expert (O’Beirne-Ryan, 2008, p. 4) and demonstrate the value of varied responses to subjective situations. However, we also posed higher-order questions, which, although they required our carefully crafting answers for students to consult, we deemed essential in a foundational course where critical thinking skills are emphasized. More extensive activities are also included. For example, composing reference glossaries with space left to add examples from the syllabus requires students to synthesize previous knowledge with commentary and handbook information. Easily adaptable to most introductory courses with discipline-specific vocabulary, this activity, as our commentary emphasizes, reinforces reading and equips the students with a handy guide for subsequent courses.

Adaptation of classroom group activities can also enhance learning. We modified an activity from a how-to guide for face-to-face classrooms that emphasizes the writing process and group work (Bean, 1996). Following a template, students compose a character analysis in poetic form that serves as a model for further character study. Role playing, debating, interviewing, and other techniques can also be revised for print packages in many disciplines.

Course packages commonly include audio tapes, but auditory stimulation can occur on another level: the student can provide an oral component. This is a natural fit with a course on Indigenous literatures that includes units on poetry and drama, but oral activities can also be effective praxis in other disciplines. The student is active – participating – and (whether speaking to a recording device, an audience, or as a solitary activity) experiencing a break from the written text, receiving similar stimulation to students in group activity. To empower and personalize, we discuss Thomas King’s (1997) belief that reading a story aloud makes the speaker a storyteller – a creator, rather than a mere conveyer. Activities can underscore course objectives and, if they are imaginative, simulate an active classroom.

Conclusions and Recommendations

Despite their differences, the realms of oral- and print-based delivery can find common ground in their fundamental objective: to facilitate learning. A positive step toward bridging the space is the recognition by all parties of this commonality and a willingness to learn from alternative modes of delivery.

I strongly recommend our mixture of educational experiences be used in preparing distance learning packages – whether introductory or advanced. The exercise engenders cooperation – not to mention mutual awareness and substantial reflection – that is beneficial to all participants in teaching and learning.

Experience with both modes engenders awareness of the strengths of each. The rigour inherent in the collaborative preparation of open learning courses may well result in stronger course content, as Gilles Paquette, Canadian Research Chair in Tele-Learning Cognitive Engineering at Téléq, the distance arm of the Université du Québec, asserts (Johnson, 2008). Unless traditional courses are team taught, collaboration tends to be minimal; yet, classroom educators and their students would be well served by the team approach. Reciprocally, the interactive qualities of the conventional classroom can be adapted to the open learning package. The course writer has a responsibility to be familiar with and attempt to incorporate theories of learning that challenge and engage. When the right to teach is invested in the course package (Guri-Rosenblit, 1999) it becomes, to use Bruner’s (1996) terminology, the enabler.

More cooperation between the two modes of knowledge delivery is both ideal and practical. As many countries have difficulty meeting the proliferating demand for university-educated students (An-
nand, 2006) and open and distance courses continue to increase nationally and globally, bridging the space between face-to-face and open delivery modes becomes imperative. Educators in each ‘world’ have much to share.

References


Biography

Ginny Ratsoy is an Assistant Professor of English at Thompson Rivers University in British Columbia, where she teaches Canadian and Aboriginal Literatures and Canadian Studies. Her scholarly publications are in the areas of British Columbian drama, contemporary Canadian literature, and non-traditional teaching pedagogies.
Using *Interteaching* to Enhance Student Engagement and Learning

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In this paper, we describe our experience with a recently devised teaching method termed *interteaching* (Boyce & Hineline, 2002). This educational approach provides a rich rehearsal of material, and emphasizes student engagement, peer discussion, and student/instructor interaction. We describe the method, provide pragmatic tips for implementation in the classroom, review empirical evidence, and discuss advantages and disadvantages.

Introducing *Interteaching*

The less than adequate characteristics of traditional lecture-based educational methods are well established. Research indicates that lecture alone leads to student passivity, does little to promote retention of learned material, discourages interaction between students and instructors, and makes it difficult for instructors to obtain timely feedback about student understanding. Research on educational outcomes shows that effective teaching typically accomplishes the opposite: promotes student engagement, further long-term retention via rehearsal, increases interaction among students and instructors, results in useful feedback from students, and is generally enjoyed by students and instructors (McKeachie, 2002).

*Interteaching* is an educational method developed by Boyce & Hineline (2002) to adapt Keller’s (1968) Personalized System of Instruction (PSI) into a form more palatable to university course formats. Keller developed PSI to address what he perceived as undesirable characteristics of lecture-based teaching. To address these limitations, he applied operant conditioning principles in the university classroom. In PSI, course material is divided into units which are sequenced by order of difficulty. Students study one unit at a time until they demonstrate mastery of the material on an exam. Students, therefore, complete the units at their own pace. During a PSI course, optional lectures may be given, primarily to enhance student motivation. Proctors, typically graduates of the course, provide tutoring and mark assignments. The instructor’s primary roles are to structure the course, supervise proctors, and construct exams.
Rather than articulating information to students via lecture, the instructor acts as a facilitator of learning.

Research has generally supported the benefits of PSI. For example, Lloyd & Lloyd (1992) report that students instructed via PSI outperformed those taught using other methods (e.g., traditional lecture and computer-based instruction) on final exams. Despite such advantages, the use of PSI has decreased since its inception. Eyre (2007) describes several reasons for this trend. First, many instructors find PSI cumbersome in practice. Indeed, preparing courses, developing multiple tests, and training and supervising proctors can be timely. Second, teaching to mastery tends to lead to uniformly high grades. Third, the self-paced nature of PSI makes the provision of the course material to all students challenging, and is also associated with student procrastination. Finally, levels of interaction with students are low, and instructors often find the lack of social exchange unrewarding.

Interteaching resolves these difficulties by employing many of the key principles of PSI with several important revisions, and by working in the context of a common university course framework. Similar to PSI, responsibility for initial engagement with course material is transferred to students. Courses are segmented into units, and students study material on their own. The instructor designs the course to facilitate student engagement with material, and pays particular attention to links between readings, class discussion, and exam questions.

Interteaching differs from PSI in several important ways. Self-pacing is eliminated, and the goal of mastery is de-emphasized to encourage student engagement and provide multiple exposures to material. This is accomplished by borrowing techniques from Reciprocal Peer Tutoring (RPT; Griffin & Griffin, 1998) and cooperative learning (Halpern, 2004). These approaches share the assumption that one effective manner of learning is to teach others. For example, in the RPT model, students develop questions that they use to quiz one another with before exams. Interteaching places peer-to-peer discussion of course material in a central role. It is the exchange between well prepared peers, which Boyce and Hine-line (2002) emphasize when defining interteaching as, “[a] mutually probing, mutually informing con-

versation between two people.” (p. 215)

Interteaching also provides a more visible role for instructors than PSI, for example, engagement with students during class discussions, and the provision of ‘just-in-time’ lectures which address student questions about the material. Thus, in interteaching, the instructor’s roles are: to structure and guide learning, promote student engagement, facilitate peer discussion, and clarify challenging information (Saville, 2006).

Interteaching Methods

The procedures of interteaching involve a number of steps. We list these briefly at this point, and expand on each below. Prior to the course, the instructor selects readings, and develops a preparation guide for each class. The method is introduced to students at the start of the course, and students prepare for class by reading and developing answers to the questions on the guide. In class, students discuss the preparation guide in pairs, while the instructor circulates to answer questions. After discussion, students complete an interteaching report, to provide feedback to the instructor. Finally, the instructor prepares a clarifying lecture based on this feedback, which is given at the beginning of the next class.

Course preparation

The course begins with the selection of readings and the construction of preparation guides. These guides consist of assigned readings and a series of questions that challenge students to comprehend key course material and direct them to important information. These guides are a central feature of interteaching. We have found that well-constructed guides can promote excellent in-class discussion and result in enhanced student interest. On the other hand, poorly constructed guides can inhibit discussion. Thus, the guide carries considerable weight, and without it, the remainder of the procedures tend to fall short.

Preparing excellent guides requires careful selection of readings and balancing of types of questions, so that students are reasonably challenged and
Using Interteaching to Enhance Student Engagement and Learning

different types of processing information are encouraged. Successful guides contain a mixture of questions that probe factual knowledge, and others that promote transformation of information via critical and analytic reasoning. For example, we find that including a limited number of questions, which cannot be directly answered from the readings but can be addressed via analytical thought, is a powerful teaching tool.

Introducing interteaching

At the start of a course, the instructor introduces the method. Some students are reluctant to engage in a new style of learning, and so the instructor must ‘sell’ the value of the method. This might include citing supportive empirical evidence, discussion of the rationale for the method, and noting that students frequently report the approach to be enjoyable than lecture alone. As with all teaching, it is important to develop a supportive culture in the classroom. Perhaps not surprising, we find that instructor enthusiasm for the approach goes a long way in motivating students to participate.

Student preparation

We encourage our students to complete the readings and arrive to class with notes to answer discussion questions. Some students follow this advice, while others prefer to come with answers to questions fully prepared. We find that it is useful to provide students with advice as to what constitutes adequate preparation, as well as to describe several different preparation strategies. We believe this helps students adapt interteaching to fit with their preferred learning styles. The fact that our students raise concerns about their level of preparation suggests that they find the method engaging.

In-class

By the time students arrive for class, they have already read the assigned materials and have processed it at a level sufficient to comprehend the questions on the guide. Class sessions begin with a focussed clarifying lecture about the material from the prior class (see below). The majority of the class is devoted to discussion of new material (two thirds to three quarters of available time is recommended). Students work together in pairs to discuss and answer the questions on the guide. An important component of the model is that students discuss with a different partner in each class. This serves several purposes: to maintain accountability to future partners, discourage interaction only with friends, and reduce social loafing. In practice, we vary the size of groups and the frequency of switching groups. Smaller groups (four or fewer) and switching with reasonable frequency (every two to three sessions) is important when facilitating quality discussions.

When introducing the method and throughout the course, students should be encouraged to pay attention to similarities and differences in their and their peers approaches to questions. This type of interchange enhances students’ awareness of the quality of their preparation. Students also benefit from being reminded that teaching information to others, even those who appear underprepared, is a way of enhancing their own learning.

As discussion progresses, the instructor circulates to answer questions, provoke interaction, and observe student comprehension. The instructor can intervene immediately when students are off track or struggling with material. We find that circulating in this manner promotes lively, engaged, and enjoyable interactions with our students.

While not a component of the original interteaching model, our students have expressed appreciation for brief introductions to novel topics prior to discussion. Hence, we frequently provide a five to ten minute introduction prior to discussion. We call this addition to the model an ‘orienting lecture.’ We find this a useful opportunity to focus student’s thinking prior to discussion.

Interteaching reports

Following discussion, each student completes an interteaching report. Students name their discussion partner(s), and assess how well the discussion went. Evaluating the quality of the exchange shows students the importance of preparation and discussion. More important, students can note any difficult questions, and specifically articulate the problem. This report
provides an alternate way to convey thoughts to the instructor, and is vital for communicating with students who may otherwise be reluctant to discuss concerns verbally (e.g., due to embarrassment, shyness, or lack of willingness to admit ignorance).

Clarifying lectures
Based on the feedback obtained from the reports and while circulating, the instructor prepares a clarifying lecture. This presentation is designed to facilitate understanding of challenging material. As noted above, the clarifying lecture occurs at the start of the subsequent class session. As this lecture flows from student input, students are likely to find it both relevant and interesting.

Evaluation
Boyce and Hineline (2002) recommend a clear relationship between preparation guide questions and test items. We also inform our students that they are responsible for material (from readings, class discussion, or lecture) not covered explicitly in guides.

Evidence for the Effectiveness of Interteaching
Research supports the effectiveness of interteaching. A laboratory-based study demonstrated that interteaching results in superior test performance relative to lecture, reading, or control groups (Saville & Zinn, 2005). Another study conducted in smaller university classes (12 to 25), found that interteaching resulted in an average 6.5% gain on cumulative final examination scores relative to lecture (Saville, Zinn, Neef, et al., 2006). A third study in which preparation guides plus in-class discussion was contrasted with the provision of guides alone demonstrated that the discussion component of the model is key to producing learning gains (Saville, 2006).

Two of the current authors (Scoboria & Pascual-Leone, 2008) recently studied an adaptation of interteaching in two large undergraduate abnormal psychology courses (enrolments 60 and 120). We found that grades on a standardized writing assignment were significantly greater following interteaching as compared with two prior offerings of the same course. Furthermore, frequency of attendance at discussion sessions showed positive relationships with performance on writing assignments, and weaker relationships with exam grades, after controlling for academic average (GPA) and student motivation for the teaching method.

Perhaps most notable, in all of the studies cited in this section, a majority of students expressed a preference for interteaching over straight lecture.

Advantages of Interteaching
We believe that interteaching provides a number of advantages over lecture-based instruction. Interteaching promotes active learning. Students must read, prepare answers, hold discussions, and listen to relevant lectures. All of this increases exposure to material, time-on-task, and individual engagement. Students must not only understand the material, but also be able to help their peers. Such transformations of knowledge help to crystallize the information in memory. An added benefit is the practice of communication skills. Interteaching creates a cooperative learning environment, which relies in part on mutual social reinforcement by peers and the instructor.

By the time students write exams, they have touched on the material multiple times and in a variety of modes. Completed guides also serve as excellent study notes. Students have multiple resources to turn to for studying, including readings, discussion notes, clarifying lecture notes, and peers with whom they hold discussions.

Finally, the method is self-correcting. Instructors and students can receive immediate feedback about topics which are not well understood.

Disadvantages of Interteaching
Interteaching is not without drawbacks. Initial preparation for interteaching-based courses can be somewhat more rigorous than preparing for lecture. Instructors must take the time to select (or develop) reading ma-
terials, design preparation guides and ensure that they are reasonably linked to evaluation methods. Instructors must tailor clarifying lectures as the course progresses. In our experience, the time required is similar to or less than that which is required to prepare for straight lectures. Furthermore, we find that many of the questions which arise can be anticipated based on the guide questions. Hence, we frequently prepare the framework for clarifying lectures in advance, and tailor them to specific student questions as needed. Since clarifying lectures are fairly short, adapting them to student questions is quite manageable. Knowing that the material is immediately relevant to student interest is worth this additional expenditure of effort.

Student engagement is an essential component of this approach. We observed several types of student attitudes that run counter to the method. Some students come to class with the guide completed, and an attitude that their work is already done. Other students express a desire to work alone or with the same partner each class. It is therefore important to convey to students the advantages of engagement. For example, the benefits of explaining material to others and the advantages of working with others to correct errors can be emphasized.

Finally, with the class-to-class cycle of preparation and discussion, there tends to be burnout later in the term. Hence, effort put into preparation and discussion begins to wane. Planning a variety of other didactic tasks throughout the course may thus prove helpful.

Summary

Interteaching is a theoretically-based and empirically-tested educational method which addresses many of the limitations of lecture-based and behaviourally-informed didactic methods. Interteaching addresses a number of challenges inherent to university teaching: motivating student interest, encouraging repeated exposure to and deep processing of material, promoting meaningful interaction between peers and instructors, and potentiating the development of knowledge acquisition skills, to name a few. Instructors who are seeking a teaching method which achieves these various goals may be interested in experimenting with the method themselves.

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**Biographies**

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It’s so interesting to hear how everyone comes together through music, everyone’s backgrounds are different. Some come from musical families and talent that has been passed down through generations. Some love it on their own and have no professional or classical training, but have such a connection to it. Musical repertoire could be classical or contemporary, rock and roll or country - but pitch, rhythm and melodies bring us all together through music, in one way or another.

- First-year student in a foundation course on diversity

Students come to university with diverse tastes, experiences, and backgrounds, yet we often want them to embrace a body of aesthetics, philosophies, and ideologies that reflect the material we and our established disciplines value as central. However, by using their own backgrounds as a basis for exploration, discovery, and sharing, students can learn a great amount from each other’s tastes and experiences. Two assignments designed for a first-year foundation course in music history and literature draw on personal backgrounds. Personal Music History and Music Repertoire Assignment allow students to bring the music they know and love, as well as their life experiences to the study of a new body of musical literature. Although music-specific, these assignments can be tailored to virtually any field of study within a first-year foundation course. Engagement on a personal level with course-related material makes the transition from high school to a university-level course smoother.

The Course: Introduction to Music History and Literature

Four years ago, I was charged with creating a foundation course that would teach students not only disciplinary knowledge (indeed, it was remedial to a certain extent), but also study skills, critical thinking and writing, research methodology, and how to write a sound research paper. It was a daunting task,
not only for the sheer amount of material to be covered, but also because the course would be delivered to students with wide variance in preparedness and training. Given that the first weeks of the first year of university introduce students to new ways of living, learning, and interacting, I wanted the course to connect and guide students while they dealt with this culture shock. I needed to find a way to make the students confident about their own level of knowledge and expertise, and the expectations and material I would be introducing to them.

The course was, and is, a required first-year core within the music history sequence, and along with theory courses, private music lessons, and membership in a musical ensemble, forms the primary introduction to the Bachelor of Music degree. This one-semester course attempts to be all things to all students, and also allows them to bond as a cohort to go through four very challenging years of music study together. The course is structured in such a way that students complete eight weeks of listening journals (in which they listen to, comment, and critique various pieces of assigned classical music repertoire), submit weekly written assignments of 2-3 pages, write a final exam based on the last weeks of lectures, and complete a research paper.

The Assignments

One of my first assignments in the course was to have students create a personal musical family tree. To allow students the most freedom to show their creativity, I made the assignment completely open in terms of content and style of presentation. I received everything from traditional Bristol board posters to PowerPoint presentations, CD compilations, and photo albums with commentary. Student were invited (although not required) to present their music history to the others at the beginning of class as we moved through the semester. Limited to five minutes, this assignment allowed each student to introduce him or herself to the other students from a completely unique and personal perspective, sharing the journey each had taken on the road to a music degree. Class members were free to ask questions of each student at the completion of the informal presentation. The assignment, as it appeared in the syllabus, is as follows:

MUSIC 1201: Assignment #2
Personal Music History

The purpose of this assignment is to provide a framework for your own musical identity. Where do you come from? Who has been involved in forming your musical personality and tastes? Go as far back as you can in your ancestry (your musical influences) to see where your musical roots come from. A historian should be able to unearth your “family tree” and write a history of you from this information. He or she should be able to make some correct assumptions and draw some accurate conclusions from what you have provided. We will informally present these throughout the semester, as time allows.

1. Choose some kind of visual system to show your “musical family tree” - a flow chart, organizational chart, etc.
2. Include all the people who have influenced your musical training, choices, etc. These can range from family members and music teachers to composers, performers, and recordings.
3. Include important pieces of music, either attached to people, or as separate entities. This is not about your real family, but about your musical influences.
4. You may think that your musical heritage might be small, but go as far back as you can and think about influences as broadly as you can. You will find that your chart will be quite large.
5. Creativity will be rewarded as well as form and content.

The results from this assignment exceeded my greatest expectations. Although assigned within the first frantic weeks of term, I received polished, passionate, and creative assignments from virtually every student
in the class. Asked to reflect on the pieces, composers, and personal influences on their music development and interests, the students created beautiful testaments to their lives and those who had influenced them. Not only did this allow students to reveal their own tastes and histories, it made them feel that they already had a large amount of knowledge and expertise that they brought to the degree. Even those who had little background in classical music could relate their experiences and choices to those of other students who had more classical training. This allowed the students to bond earlier and more completely as a group, and also highlighted the diversity in the students’ backgrounds without devaluing them or pigeonholing individuals into particular roles.

In a similar vein, another assignment at the beginning of the course allowed students to bring their own knowledge to the body of music I wanted them to master. Each of the eight “listening journal” weeks was organized around a theme common to music of all eras: love and death, ritual and myth, power and politics, gender and ethnicity, among others, pulling together works from different historical periods and giving a point of comparison to classical works not as familiar to all students. The “Personal Music Repertoire” assignment asked each student to write down a piece of music in any genre, style, or period, that first came to mind when they considered each week’s theme. This is how the assignment appeared in the syllabus:

MUSIC 1201: Assignment #1
Personal Repertoire List

Consider the following large topics or subject areas, and choose one piece of musical repertoire (any style, time period, genre) that first comes to your mind when you think about this subject or theme. It does not matter how long or short the work is (it can be one movement of a work) or whether it be popular or classical music. Write the title of the work, composer, artist, etc. below and hand in. Write these piece titles into your syllabus under “your piece.” You will use this later in the semester.

1. Music, Meaning and Memory
2. New Beginnings
3. Ritual and Myth
4. Highbrow vs. Lowbrow
5. Music without lyrics that is about something non-musical (a narrative, situation, feeling)
6. Gender, Class, Ethnicity
7. Love and Death
8. Power and Politics

Students invariably picked something from current popular music to pieces they may have performed in band or listened to as children. I had them hand in this list so that I could get a sense of where each student was coming from, and the kinds of music that they listened to or knew quite well. In the following weeks, each listening journal entry would include the repertoire I had assigned as well as “my piece” – the work they had chosen in the first week of classes. By listening to and commenting on their own choices, students were able to bring to the assignment their own experiences to an unfamiliar repertoire, finding similarities and differences between the classical works and the (often) popular works they had chosen. Instead of facing a huge vista of unknown material, the students could bring their own knowledge to the topic at hand, making connections and demystifying the experience of writing about music. Because in each listening journal the student was required to relate each piece in the list to the week’s theme, students were able to see that music in a variety of styles and periods addressed certain aspects of the human condition regardless of intended audience or musical style.

Assessment and Outcomes

Because these two assignments came in the first weeks of the course, the grading scheme was meant to reward and encourage rather than discourage the university neophyte. Although I considered peer or self evaluation, the very nature of the exercise – to let students wade into a new learning environment
seemed to suggest an approach in which a new evaluator rewards the student and establishes that relationship positively. Personal music histories were graded on content, style, and creativity while the personal music repertoire was pass/fail. Simply completing it earned students full marks and gave them a good start to their academic careers in music history. As students moved through the semester, they were allowed to change their personal repertoire as they learned more music or had more time to reflect on the assignment. I was not concerned with holding them to their original responses, but more with allowing them to think broadly and deeply about the music to which they listened.

The outcomes of this assignment lasted long after the papers were turned in. Students, relying on gut feeling and free-association on each weekly theme, started thinking about course content and continued to engage with the material so that the course started to feel like a coherent whole, not a series of hurdles. Connecting with their passions and inner lives allowed students not only to open up to me as an instructor and to their classmates, but reminded them why they were studying music in the first place.

These aspects of self-identity and definition provided perhaps the first opportunity many of them had to explore their own tastes and backgrounds, especially in contrast to other students. Students, regardless of background, were empowered by adding something they already knew and felt comfortable with to something completely new. Because the assignment asked them to relate their pieces and the assigned pieces to the weekly theme, they were able to make these connections. Students got to know each other through something important to each of them: music. Because individual preferences and knowledge were valued and rewarded, students automatically respected the diversity that they found in their colleagues. One student, hailing from South America, entertained questions on his life at home, questions that students might not have felt comfortable asking under more formal circumstances. More importantly, diversity in cultural, educational, and musical backgrounds allowed students to understand that critical thinking involves engaging respectfully with a variety of different and often competing ideas.

Although this assignment clearly addresses musical tastes and backgrounds, it could easily be adapted to other areas of study. Students in first-year science could be asked to reflect on what aspects of science fired their interest in the subject — was it medical breakthroughs, environmental concerns, or a fascination with the scientific method that brought them to this major? Students in fine arts or humanities could reflect on literature, music, or other arts that attracted them to the study of a particular culture or art form. Social science students could reflect on aspects of social justice or cultural issues that have formed their research interests. Students usually know what interests them, but asking them to consider why or to what end helps them to commit and engage with their area of study at the very beginning of their careers as undergraduates or even graduates.

Diversity of taste and background, when shared, helps students to understand each other’s unique perspectives and cultural diversity. In an increasingly global and international classroom, exploring and respecting that diversity creates a more humane and engaging world of learning for students in any discipline.

**Biography**

Elizabeth A. Wells is an Associate Professor of Music History and Musicology and Head of the Music Department at Mount Allison University, New Brunswick. Her scholarly interests include musical theatre, opera, and the Scholarship of Teaching and Learning.
Learning a song requires storage of melodic and textual information into memory. Although music and text are processed in different parts of the brain (Samson & Zatorre, 1991; Besson, Faïta, Peretz, Bonnel, & Requin, 1998), song tunes and lyrics are associated with each other in memory, such that the recall of one aids in the recall of the other (Calvert & Tart, 1993; Ginsborg & Sloboda, 2007). Teachers can take advantage of this association to help students learn concepts related to their field of study by presenting information in the form of a song.

It is easier to learn unfamiliar words when they are set to a familiar tune rather than an unfamiliar tune (Wolfe & Hom, 1993; Claussen & Thaut, 1997). Therefore, it is better to associate information to be learned with a tune that is already a part of long-term memory. For this reason, teachers have written content-specific lyrics to popular songs (Dickson & Grant, 2003; Gilbert, 2006) to associate new information with melodies already present in the student’s long-term memory. The intent of this practice is to help students retain information in a fun and engaging way.

A notable author of such songs in my field (biochemistry) is Dr. Kevin Ahern of the Depart-

Using Content-Specific Lyrics to Familiar Tunes in a Large Lecture Setting

Derek T. McLachlin
University of Western Ontario

Music can be used in lectures to increase student engagement and help students retain information. In this paper, I describe my use of biochemistry-related lyrics written to the tune of the theme to the television show, The Flintstones, in a large class setting (400-800 students). To determine student perceptions, the class was surveyed several weeks after the song was used. Students reported a high level of engagement and enjoyment during the song. Many students found the song to be a helpful study tool. To guide future song selection, the students were also asked to indicate their familiarity with 30 popular songs from the past 50+ years. The songs that were least familiar to the students were all released before 1980, but some older songs were well known. The results support the use of content-specific lyrics set to familiar tunes as an educational tool, and provides information about specific songs that would or would not be suitable for this purpose.
ment of Biochemistry and Biophysics at Oregon State University (Ahern, n.d.). Examples of songs he has written are B-DNA (to the tune of YMCA), The Sound of Glucose (to the tune of A Few of My Favourite Things), and The Cell’s Lament (to the tune of Yesterday).

In my introductory, second-year biochemistry course, I have used The Histone Song (Gilbert, 2006) in a lecture on DNA packaging. The lyrics of this song, written by Scott F. Gilbert of the Department of Biology at Swarthmore College, describe the packaging of DNA into nucleosomes. The song is sung to the tune of the theme to the television show The Flintstones. I project the words onto a screen, and invite the students to sing the song with me, a capella. I also ask the students to clap in time to keep the beat. Student-captured video of the use of the song in my class can be viewed on Youtube (Meet the histones!, 2008). After class, the lyrics to the song are made available to the students via the internet.

To better evaluate the effectiveness of this song as a learning tool, I was interested in obtaining a broader sample of student opinion. In the second part of the survey, students were presented with the title and recording artist of popular songs from the 1950s to the present, or with a television show theme. They were asked whether they were familiar with any part of the tunes to these songs. The songs that were least familiar to the students tended to be the older songs, but some songs released in the 1960s, 1970s and 1980s were familiar to many students (Table 1). Ninety-six percent of students reported that they were familiar with the theme to The Flintstones before the class in which we sang The Histone Song. The list of songs included several (indicated by asterisks in Table 1) to which Dr. Ahern has written biochemistry-specific lyrics. These songs vary considerably in their familiarity to students.

Features of music that aid in recall of lyrics include not only the melody line itself but also rhythmic elements, stress of certain beats, organization
### Table 1

*Familiarity of Undergraduate Students with Popular Songs from the 1950s to the Present*

<table>
<thead>
<tr>
<th>Title</th>
<th>Artist</th>
<th>Year of release or original air dates</th>
<th>Percentage of students reporting familiarity</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>YMCA</em></td>
<td>The Village People</td>
<td>1978</td>
<td>97.3</td>
</tr>
<tr>
<td>The Flintstones theme song</td>
<td>—</td>
<td>1960-66</td>
<td>96.4</td>
</tr>
<tr>
<td>Friends theme song</td>
<td>—</td>
<td>1994-2004</td>
<td>93.6</td>
</tr>
<tr>
<td>SexyBack</td>
<td>Justin Timberlake</td>
<td>2006</td>
<td>93.1</td>
</tr>
<tr>
<td>Girlfriend</td>
<td>Avril Lavigne</td>
<td>2007</td>
<td>88.1</td>
</tr>
<tr>
<td>Girls just want to have fun</td>
<td>Cyndi Lauper</td>
<td>1983</td>
<td>87.4</td>
</tr>
<tr>
<td>Wannabe</td>
<td>The Spice Girls</td>
<td>1996</td>
<td>83.1</td>
</tr>
<tr>
<td>A moment like this</td>
<td>Kelly Clarkson</td>
<td>2002</td>
<td>82.7</td>
</tr>
<tr>
<td>Yeah</td>
<td>Usher</td>
<td>2004</td>
<td>81.4</td>
</tr>
<tr>
<td>Respect</td>
<td>Aretha Franklin</td>
<td>1967</td>
<td>80.5</td>
</tr>
<tr>
<td>Hotel California</td>
<td>The Eagles</td>
<td>1976</td>
<td>80.2</td>
</tr>
<tr>
<td>ABC</td>
<td>The Jackson Five</td>
<td>1970</td>
<td>80.2</td>
</tr>
<tr>
<td><em>Yellow submarine</em></td>
<td>The Beatles</td>
<td>1969</td>
<td>78.5</td>
</tr>
<tr>
<td>Billie Jean</td>
<td>Michael Jackson</td>
<td>1983</td>
<td>78.3</td>
</tr>
<tr>
<td>All star</td>
<td>Smash Mouth</td>
<td>1999</td>
<td>77.4</td>
</tr>
<tr>
<td><em>American pie</em></td>
<td>Don McLean</td>
<td>1971</td>
<td>74.0</td>
</tr>
<tr>
<td><em>Yesterday</em></td>
<td>The Beatles</td>
<td>1965</td>
<td>71.7</td>
</tr>
<tr>
<td>Like a prayer</td>
<td>Madonna</td>
<td>1989</td>
<td>67.4</td>
</tr>
<tr>
<td>All I wanna do</td>
<td>Sheryl Crow</td>
<td>1994</td>
<td>62.6</td>
</tr>
<tr>
<td>I still haven’t found what I’m looking for</td>
<td>U2</td>
<td>1987</td>
<td>59.3</td>
</tr>
<tr>
<td>Smells like teen spirit</td>
<td>Nirvana</td>
<td>1991</td>
<td>58.5</td>
</tr>
<tr>
<td>Cheers theme song</td>
<td>—</td>
<td>1982-93</td>
<td>53.3</td>
</tr>
<tr>
<td><em>Danny boy</em></td>
<td>Traditional Irish song</td>
<td>—</td>
<td>39.1</td>
</tr>
<tr>
<td>Mr. Sandman</td>
<td>The Chordettes</td>
<td>1954</td>
<td>34.4</td>
</tr>
<tr>
<td>Gilligan’s Island theme song</td>
<td>—</td>
<td>1964-67</td>
<td>33.3</td>
</tr>
<tr>
<td><em>Blowin’ in the wind</em></td>
<td>Bob Dylan</td>
<td>1963</td>
<td>31.4</td>
</tr>
<tr>
<td>Put your head on my shoulder</td>
<td>Paul Anka</td>
<td>1959</td>
<td>24.4</td>
</tr>
<tr>
<td>*Thank God I’m a country boy</td>
<td>John Denver</td>
<td>1974</td>
<td>23.2</td>
</tr>
<tr>
<td>M<em>A</em>S*H theme song</td>
<td>—</td>
<td>1972-83</td>
<td>17.1</td>
</tr>
<tr>
<td>Blueberry Hill</td>
<td>Fats Domino</td>
<td>1956</td>
<td>6.3</td>
</tr>
<tr>
<td>Chances are</td>
<td>Johnny Mathis</td>
<td>1957</td>
<td>5.4</td>
</tr>
</tbody>
</table>

* Songs to which Dr. Kevin Ahern of the University of Oregon has set biochemistry-related lyrics.
into phrases of defined length, sequence cues, and repetition or regularity of elements (Gingold & Abravanel, 1987; Hyman & Rubin, 1990). Music that is ill-suited to the lyrics in terms of these features can interfere with learning and recall of lyrics (Gingold & Abravanel, 1987).

Given the above, instructors seeking to write their own words to popular tunes should strive to select songs with which the students are likely to be familiar; and appropriately match the lyrics to the melody.

A question of potential concern is whether the use of popular songs in this manner infringes copyright. Section 29.5 of the Copyright Act of Canada (1985) states:

It is not an infringement of copyright for an educational institution or a person acting under its authority to do the following acts if they are done on the premises of an educational institution for educational or training purposes and not for profit, before an audience consisting primarily of students of the educational institution, instructors acting under the authority of the educational institution or any person who is directly responsible for setting a curriculum for the educational institution:

(a) the live performance in public, primarily by students of the educational institution, of a work…

A large number of students sing along with me, and thus I would argue that the performance is primarily by students, and therefore not an infringement of copyright. However, instructors may wish to contact the copyright owners of songs they want to use in class, to obtain explicit permission to use the songs in this way.

The results of my survey show that my second-year university students find The Histone Song to be an enjoyable part of lecture as well as a useful study aid. Well-written songs of this type can enliven a lecture and provide students with an entertaining way to review material.

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*Memory & Cognition, 18*, 205-214


**Biography**

Derek T. McLachlin is an Assistant Professor in the Department of Biochemistry at the University of Western Ontario in London, Ontario. He has conducted biochemical research in the areas of protein chemistry and the analysis of protein phosphorylation by mass spectrometry. His interests focus on the scholarship of teaching and learning, particularly in the area of student engagement.
The use of group work has been noted as an important pedagogical tool for promoting the development of social skills, student engagement with course material, peer directed learning, self reflection, and critical thinking (Biggs, 2003). Because of its perceived intellectual, academic, and social benefits, group work is increasingly used in a myriad of classroom settings. Although the incorporation of group work into university courses is growing in popularity, the process of how to actually do group work is rarely taught to students. Group work assignments tend to be content rather than process focused, with the implicit assumption being that students will learn the necessary skills for working effectively in groups experientially through engaging with others in task-oriented assignments. Students are rarely encouraged or required to critically self reflect on their interpersonal dynamics when engaging in group activities, with group work assignments traditionally being marked on the final product (content) rather than the mechanisms through which the product was collectively created (process). As such, students engage in knowledge-based learning through group-oriented exercises, but rarely achieve the level of interpersonal skill development that such exercises are purported to elicit.

Recognizing the need to approach group work in an innovative way to maximize its potential learning benefits for students, I experimented with

Feminist Group Process in Seminar Classes: Possibilities and Challenges

Betty J. Barrett
University of Windsor

In this essay, I describe my experience applying the principles of feminist group process in a senior level social science course. I begin by providing an overview of feminist pedagogy as an approach to teaching and learning and discuss the relevance of feminist group process within this model. I then highlight the core components of feminist group process, outlined by Chinn (2004), that I integrated into my classroom. I conclude with a discussion of recommendations for curriculum development based on my own praxis.

Introduction

The use of group work has been noted as an important pedagogical tool for promoting the development of social skills, student engagement with course material, peer directed learning, self reflection, and critical thinking (Biggs, 2003). Because of its perceived intellectual, academic, and social benefits, group work is increasingly used in a myriad of classroom settings. Although the incorporation of group work into university courses is growing in popularity, the process of how to actually do group work is rarely taught to students. Group work assignments tend to be content rather than process focused, with the implicit assumption being that students will learn the necessary skills for working effectively in groups experientially through engaging with others in task-oriented assignments. Students are rarely encouraged or required to critically self reflect on their interpersonal dynamics when engaging in group activities, with group work assignments traditionally being marked on the final product (content) rather than the mechanisms through which the product was collectively created (process). As such, students engage in knowledge-based learning through group-oriented exercises, but rarely achieve the level of interpersonal skill development that such exercises are purported to elicit.

Recognizing the need to approach group work in an innovative way to maximize its potential learning benefits for students, I experimented with
the implementation of feminist group process in a senior level social science seminar course. In this essay, I briefly describe the core principles and theoretical underpinnings of this approach as well as the specific strategies I implemented in my classroom. I conclude with recommendations for educators for the successful implementation of this process based on my own praxis.

**Feminist Pedagogy**

As a social work and women’s studies educator, my approach to teaching and learning is heavily influenced by the principles of feminist pedagogy. Feminist pedagogy has been defined as a collection of classroom practices, educational strategies, and relational approaches informed by critical pedagogy and feminist theories (Crabtree & Sapp, 2003). Feminist pedagogy promotes transformative learning by replacing the “banking model” of education, in which students are viewed as passive receptacles of information, with a “partnership model” which constructs students as co-producers of knowledge (Stake, 2006). Educators informed by feminist pedagogy strive for the integration of action with reflection within the classroom as well as the empowerment of students as active agents of learning. By legitimizing individual experiences as an appropriate point of entry for inquiry and encouraging a theoretical analysis of these experiences as valid scholarly activity, feminist pedagogy seeks to engage students as mutual participants in the learning process. Through participatory learning, self reflection, and consciousness-raising, feminist pedagogy seeks to both intellectually and emotionally engage students as dynamic learners. Through this process, feminist pedagogy strives to cultivate both the personal and political empowerment of students to become catalysts for social change (Carillo, 2007; Crabtree & Sapp, 2003; Larson, 2005; Stake 2006).

**Feminist Group Process**

The application of feminist group process in the classroom is one practical strategy for implementing the theoretical principles of feminist pedagogy (Banister & Schrieber, 1999). This approach constructs the classroom as a unified group rather than a collection of individuals, and contends that attention to process is just as integral to learning as it is attention to instructional content. Feminist group process therefore strives to demystify and make explicit all of the processes, structures, and interpersonal dynamics that often go unnamed and unchallenged in traditional group settings. Through making these processes explicit, individuals are then able to engage in skill building by challenging unproductive communication patterns, engaging in group decision making, and transforming group conflict (Chin, 2004). The “peace and power” principles, outlined by Chin (2004) and briefly summarized below, provide concrete strategies for promoting shared responsibility for learning, developing collaborative leadership skills in students, and connecting feminist theory and praxis in the classroom.

Although feminist group process is attentive to the collective experience, the group is also a site for individual learning and transformation. As such, feminist group process seeks to humanize the classroom experience for students. Every session begins with a brief ‘check in’ – each student is asked to share with the group any circumstances that might influence his or her ability to be an active participant in the discussion that day (for example, “I am distracted tonight because I have a big exam in another class tomorrow that I am worried about, but I want to hear the discussion and participate as much as possible”), and to share any expectations, hopes, or concerns about the session. By focusing individualized time on each student at the beginning of every class, the group context becomes personalized. This not only honors each individual’s holistic identity and recognizes that students have other identities, roles, and responsibilities outside of the classroom that may impact their ability to be entirely present in the classroom, but it also encourages the development of empathy and community among students (Chin, 2004).

Central to feminist group process is shared leadership among group members. One way this is done is through a rotating ‘convener.’ The primary
responsibility of the convener is to facilitate the content of group discussions and monitor and guide the group process through dismantling unproductive interpersonal dynamics. This position is rotated every week to ensure that each student is able to develop leadership and communication skills. The convener is responsible for guiding the content of the discussion through the establishment of a mutually agreed upon ‘agenda’ for the session in consultation with the whole class. The convener is also responsible for initiating and structuring the discussion by preparing a SOPHIA (Speak Out, Play, Havoc, Imagine, Alternatives), which he or she shares at the beginning of the session outlining his or her initial thoughts and questions in response to the agenda topic. The convener guides group process through actively listening to the discussion and facilitating any necessary changes to keep the group focused on its purpose. For example, if it appears that a particular student is engaging in a monologue or two students are interacting only with one another in a dialogue, the convener may attempt to shift this dynamic to an ‘every-logue’ through the use of circling or sparking. In circling, the convener halts the group discussion and engages every participant in a ‘round robin’ forum in which each person is asked to contribute. In sparking, the convener poses a particular question or specific issue and allows everyone to spontaneously generate response in a continuous free flowing fashion. As the convener role rotates throughout the group, every individual is able to strengthen their collaborative leadership skills (Chin, 2004).

A primary responsibility of the convener is to facilitate the use of value based decision making in the group. Through this process, all decisions in a group are made by weighing the degree to which each possible outcome reflects the core values of the group. At the beginning of the semester, the class brainstorms a list of values that they would like to define their classroom experience. Whenever a decision must be made, the question is posed to the group, who then brainstorms all of the possible options as well as the potential consequences of each option. The group then works together to narrow down the options based on those that best reflect the core values defined at the beginning of the class through the process of consensus. In this way, the process of group decision making is made explicit to all participants, strengthening each individual’s problem solving, communication, conflict resolution, and social skills (Chin, 2004).

The Senior Seminar Experience

The Women's Studies Seminar is a small (8-student), semester-long course dedicated to the in-depth examination of a key issue in feminist scholarship, activism, or discourse. In the winter 2008 semester, I dedicated the focus of this course to the study of feminist group process. The class met once a week in a three hour time slot for a total of thirteen weeks. The three hour class was divided into two core components: during the first half, the class met as a whole to discuss an assigned reading and a pre-determined topic; during the second half, the class was divided into two smaller groups that were engaged in a semester long group research project. In preparation for every session, students were asked to read an assigned article and complete a weekly journal entry addressing questions posed in their syllabus. The final mark for the course was evenly divided, with approximately 50% of the final mark determined by their journal entries and participation in the seminar discussion and the other 50% allocated to their group project.

To familiarize students with the principles of feminist group process, the first two sessions of the class were devoted to reading and discussing selections from Chin’s (2004) book Peace and Power: Creative Leadership for Community Building. During these sessions, we brainstormed our class list of values to be the basis for our decision making throughout the semester. The students compiled a list of 20 mutually agreed upon values, including academic success, equality in ownership, constructive criticism,
respect for individual comfort levels, and the right to abstain from participating. I served as the class convener for the first two sessions, after which students rotated convener responsibilities for the remainder of the semester.

At the beginning of the semester, each small group was required to develop a group work plan that would guide their semester long research project. In this plan, they were required to outline the ‘content’ of their group meetings (e.g., timelines, tasks, and responsible parties), and how the group would successfully facilitate their ‘process.’ Each small group was required to devise their own list of values to guide the decision making process in their individual groups and to concretely outline how they would deal with common problems that emerge in group work (such as interpersonal conflict, poor performance of individual group members, etc.). At the end of the semester, each group was required to hand in a collective description of any changes that had been made to their original group work plan over the course of the semester, in terms of both ‘content’ and ‘process,’ as well as an individual reflection paper on the process of working collectively with their group.

As the course instructor, I had a unique role in the group. Although a primary purpose of feminist group process is to reduce hierarchy among group members and promote a shared responsibility for learning, it was not possible to ignore the fact that I held more power and responsibility in this setting than the students. Even though student conveners established weekly agendas for the course, these agendas were shaped by the guiding questions I posed for each weekly topic in the syllabus. Further, although it was the principal task of the conveners to direct group content and modify group process, it was necessary for me to step in and assist in this regard when the convener was unable to successfully re-direct un-productive group interactions or appropriately clarify content. During the second half of the class period, when students were engaged in their research projects, I acted as a consultant to both groups, providing feedback, insight, encouragement, and direction when necessary. Finally, and most importantly, it was my responsibility to assign each student a mark for the class (although a portion of the final group research project grade was based on peer feedback and evaluation). In this way, even though the class was centrally focused on student-directed learning, the primary teaching responsibility remained firmly with me as the instructor.

The initial reaction from students ranged from excitement to apprehension. In their journal entries, students who identified as ‘shy’ and ‘introverted’ expressed discomfort with the level of student interaction that was required in the course. Other students wrote that they were invigorated by the class because it was primarily student facilitated and felt empowered by the opportunity to take an active role in guiding the course experience. Still, others expressed hostility at my refusal to lecture and placement of responsibility on the students for the weekly facilitation of discussions, with one student stating that I was “exploiting student labor” through expecting the student convener to be responsible for establishing an agenda for each session and to facilitate both the content and process of the discussion. Another student noted that I was “not teaching” by expecting students to learn from one another through group projects and student-facilitated dialogue rather than preparing traditional lectures for the students.

While I had envisioned that students would be energized and transformed by the non-conventional nature of the class, I discovered that many students were quite simply ill prepared to engage in meaningful group-based learning with their peers. Although almost all of the students had reported in their journals that they frequently participated in group work throughout their university education, none had ever been asked to engage so extensively with the process as well as the content of these activities. Further, group work had been treated as an ‘add on’ in many of their previous courses, supplementing an instructional approach that was still primarily instructor and lecture driven. When group work was moved from the margins to the center of the classroom experience, they were unable to adjust their expectations from the banking model, which had been a pervasive feature of their university educations thus far. As an instructor, I struggled to modify my own expectations for the course with the reality that although many students may have been previously
taught group work that they had not truly learned the skills of doing group work. As aptly observed by one student in her anonymous evaluation of the course:

…this course was almost idealistic and though nice in theory is not very applicable even within the classroom itself. Most students have internalized the traditional classroom within the world of academia for too much of this course to be as effective and profound as I was anticipating among fourth year women’s studies students even. People are still caught up in their power hierarchies and structures and these still dominated this course even though it was against the objective.

**Recommendations**

The integration of group work in the classroom is important not only for knowledge acquisition but also for skill development. Despite the potential of group work to enhance problem solving, communication, conflict resolution, and social skills among students, many approaches to group work remain content rather than process focused. As such, students may enhance their knowledge of a subject area through group oriented activities but fail to develop the interpersonal skills that such activities are designed to strengthen. To maximize the benefits of group work, instructors must recognize that group work is a skill that must be learned and cannot assume that students understand how to successfully navigate interpersonal relationships simply by being asked to engage in content-driven group-oriented activities.

Educators must approach group work as a skill building activity not simply as a conduit for knowledge-based learning. This can be accomplished through the integration of group work in introductory courses to provide a foundation for the further development of group work skills both vertically and horizontally across the curriculum. This must include the integration of course lectures and readings to assist students in differentiating between group content and process. Further, group work must include a self reflection component, which encourages students to critically analyze their group experiences to strengthen students’ abilities to effectively challenge dynamics that impede positive group process.

Wlodkowski (1986) notes the potential utility of Johnson and Johnson’s (1982) Cohesion Behavior Inventory to assist instructors in self evaluating their effectiveness at creating a learning environment that maximizes student engagement, motivation, inclusion, and cohesion in group based learning activities. This short, likert scale can also be modified for completion by students to encourage self reflection about their own experiences in group learning activities. Items on this survey include: “I disclose my ideas, feelings, and reactions to what is currently taking place in group,” “I am influenced by group members during instruction with respect to their specific needs and opinions,” and “I express acceptance and support when other members disclose their ideas, feelings, and reactions to what is currently taking place in the group” (Wlodkowski, 1986, p. 201). The administration of this scale throughout the semester not only provides instructors an ongoing opportunity to determine if students are successfully enacting the principles of group work (and, thus, evaluate the effectiveness of their pedagogy), but also facilitates students’ self reflection on their experiences in the classroom. As a central goal of feminist pedagogy is to honor student experiences as an entry point for inquiry and to engage students as active participants in the learning process, the use of structured self assessment measures, such as the Cohesion Behavior Checklist, may be a valuable tool for achieving these goals.

Finally, marks for group work must encompass an assessment of both content and process. This can be achieved through requiring students to develop a written plan for their process at the onset of the project, which may include distribution of responsibilities among group members, initial timelines for completion of tasks, and protocols for how the group will address common problems in group work (such as poor performance among members, unequal distribution of labor, etc.). Students can then be asked as part of their final project mark to turn in a critical self reflection discussing their group’s implementa-
tion of this protocol throughout the duration of the project. One possible strategy for fairly assessing students’ group process is to determine a small portion of each student’s mark based on peer feedback. Students can be asked to develop a mutually agreed upon peer grading rubric as part of their initial group work plan, which can serve as the basis for this portion of the mark. Empowering students in the group to provide feedback on one another’s performance which will be considered in assigning a process mark for the assignment may be a viable tool for enhancing mutual responsibility for learning in a group context.

Only through transforming the way that group work is taught can group work truly become a transformative learning tool for students.

References


Biography

Betty Jo Barrett is an Assistant Professor of Social Work and Women’s Studies at the University of Windsor in Windsor, Ontario. Her primary research and scholarly interests include: feminist social work theory, practice, and pedagogy; violence against women and children; and motherhood in the context of welfare reform.
The “Third Ear” Decolonizes: Integrating Deaf Students into Post-Secondary Classes

Zeinab McHeimech

Can we effectively integrate Deaf students into our post-secondary classes before recognizing and listening to them? Studies indicate that Deaf students continue to struggle, be silenced, and experience isolation when mainstreamed. Deaf students, or second-language students, inevitably develop new identities once included; however, we cannot justly ask that they abandon their own cultural identities, nor ignore that they have their own cultural and individual identities. This paper draws on the literary theorist Homi Bhabha, specifically his notion of the “third space.” I propose that as educators we enter and create this space for our students and begin listening to them using a “third ear” so as to enable the surfacing of their cultural identities in hopes of countering their struggles, perpetual silencing, and isolation. The essay focuses largely on the implementation of the third ear and third space by programs found in the humanities.

Since cultural spaces or discourses define what is acceptable in society, and this acceptance of an individual within a particular society mediates around the individual’s body, that is, his or her normal/abnormal body, we must recognize the classroom as a cultural space and investigate what we have been including or excluding. This paper calls for the integration of Deaf students into a post-secondary class through the establishment of a metaphorical “third ear.” The third ear is an extension of what Bhabha (1990) refers to as the “third space,” the interstices, or openings, between two cultures, “which gives rise to something different, something new and unrecognisable, a new area of negotiation of meaning and rep-

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1 Deaf (with a capital D) denotes one who is born Deaf or became Deaf at a very young age, whereas deaf (lower case d) represents one who has developed a hearing impairment later in life.

2 The notion of a third ear disrupts the notion of a perfect body by removing access to the categorization of a perfect body. In other words, the addition of this ear de-emphasizes notions of the ideal body, because now a person, metaphorically, has three ears. The entire class can engage in cross-cultural performances where the students embrace alternative ways of understanding language. The third ear presents the notion of hearing through seeing, that is, shifting the focus from speech to movement in the classroom.
presentation” (p. 211) – a space created through action and interaction between students, and their instructor, specifically by dissolving the divide between oral and gestural speech. Ultimately, the third ear should function to decolonize pre-dominant perceptions of what it means to be Deaf: the false presumptions that deafness is a physical disability and that the Deaf are communicatively deficient. This paper aims to elucidate the term third ear, and provide examples of how we can use it in a class, and the university at large. This paper essentially moves from theory – theorizing about the concept of Deafness and pedagogy – to practice – how to teach the Deaf, and understand Deafness in a classroom.

Before explicating the third ear, I will establish the need to better integrate Deaf students. Hocutt (1996) compares the academic results of students with various disabilities that have been integrated into regular classes, and discovers that these students, especially deaf students, tend to do poorly in comparison to their peers due to the lack of remedial instruction. The key factors perpetuating such poor academic results are communicative and social. Most Deaf students suffer from extreme isolation or feelings of alienation upon entering a post-secondary institution. For many, it is the first time that they enter into a mainstream education. The classroom should function as a site of resistance to these feelings of isolation through the introduction of new means of communication. Lang and Meath-Lang (1992) stress that “[d]espite technological advances, social change, and increasing acceptance of sign language communication alone and in various combination with oral/aural communication, the isolating effects of deafness remain” (p. 84). When mainstreamed into a post-secondary class or institution, they feel loneliness more pronounced than what disabled students feel. As a response to this isolation, the classroom should become a space in which the Deaf are seen and heard among their peers and instructors. Additionally, it is important to use text and materials developed by Deaf people, because as Lang and Meath-Lang (1992) point out, many Deaf students have been inculcated with the belief that the hearing world is a metaphor, and so within it, they feel like outsiders entering a space they cannot fully access.

Instructors should understand the historical subject-positions of their students to render them visible – modern subjects with the ability to communicate with other modern subjects. The hearing-enabled have attempted to normalize the body of the Deaf by imposing that the Deaf learn to speak in order to belong as members of society. The Deaf were, and still are, perceived as either disabled individuals, or somehow lacking, in other words – abnormal. Kocchar-Lindgren (2006) advocates for a “third space” as a way of articulating a site where the hearing, Deaf, and hard-of-hearing come together” (p. 418). While Kocchar-Lindgren’s (2006) third space is theatrical, it can be extended to the classroom, where integration can take place. Upon entering this third space, the class becomes a location of disruption of master narratives that privilege orality. Signs, through Sign language and visual mediums, should emerge as a discourse alongside that of the spoken word. This new discourse transforms the body into a speaking body.

Many times, Deaf students are excluded from class participation and informal discussions that take place between their peers or the professor and peers. As expected, all students should have access to discussions and class activities. Deaf students tend to feel isolated in large group settings and withdraw from class participation and, further, from learning if they feel the instructor is not addressing/including them. To ensure that the Deaf still have a voice, the instructor can hold optional conferences for all students, where these students can begin one-on-one dialogue. During the conferences, the professor can ‘hear’ the Deaf students’ voices that are evoked through a combination of language and gesture, and understand how his/her Deaf students speak through bodily performances. Instructors that adapt to Deaf learners inevitably enhance their overall teaching.

Focusing on the development of ideas rather than final products helps to motivate Deaf students. Because as Hermans, Ormel, Knoors, and Verhoeven (2007) have pointed out, Deaf children learn languages through visual mediums. As a result, a class must include the visual, whether through PowerPoint presentations, artwork or performances in
the class. Deaf students can listen visually to the gestures, sounds, and movements of the instructor. Students, both hearing and non-hearing, will find the opportunity to think with and through signs. Subsequently, this third ear functions as a dialogical tool where contrasting perspectives or mediums are presented without privileging one over the other. An animated instructor, who speaks at a slower pace, and only when facing his/her students, can communicate more effectively to all students. In addition, if more attention is given to the writerly bodies themselves, rather than merely the text or linguistic positions of individuals, the class becomes more inclusive. As a result, we have an overlapping of cultures, in which all cultures, including Deaf culture, become visible.

We integrate the Deaf community in this third space by giving them access to academic discourse. With the third ear they enter a site of resistance, a space in which change becomes possible. The move towards multiculturalism relocates abandoned knowledge – knowledge that has been rejected because it belonged to the ‘Other’ in society – and consequently reinstitutes ‘aliveness’ through difference. Davis (1995) reminds us that we need to be aware of the political and social implications of labelling one’s body as disabled. But, by reconceptualising the space they exist in through the act of bringing them into a third space, and then further re-imagining their bodies through the addition of a third ear, we eventually acknowledge the visibility of the students and their comfort in this space.

Furthermore, the third ear establishes negotiation, collaboration, and reflection as possible. Sacks (1989) notes that “[t]o be deaf, to be born deaf...exposes one to a range of linguistic possibilities, and hence to a range of intellectual and cultural possibilities, which the rest of us, as native speakers in a world of speech, can scarcely even begin to imagine” (p. 116). By redesigning our conception of difference, by accepting difference, we must also be prepared to redesign our own physiology, inventing the third ear within our classrooms, such as, in the ways we approach space, how we interact with students, the assignments we give, and so on. We create an ear that hears by paying attention to the ways the body speaks.

Integrating Deaf students begins at the university level and progresses into classrooms. It is crucial that universities provide a home base on their campuses for the Deaf that will provide resources for mainstreamed students. Not only would it provide essential resources to Deaf students, but would also attract them to pursue an education at a post-secondary level, which should counter the low entrance of Deaf students at a university level, as well as the trend of dropping out of school. This home base should include developmental courses, social activities, as well as make available various technological developments, such as Real Time Graphics Display (RTGD). The professor, moreover, should become involved in this process. For instance, professors may evaluate the class notes being offered to their students. Alone, however, these do not disrupt the ongoing historical silence that Deaf students have faced.

In creating the third space, we can complicate our students’ assumptions about Deafness. As Kocchar-Lindgren (2006) points out: “[a] hearing person assumes that deafness is based on a lack, an inability to hear sound with insufficient access to spoken language” (p. 418). A study conducted by Harris (1995) reveals that “Deaf people...did not conceptualize Deafness as a loss at all” (p.167). This presumed lack should manifest itself as a false assumption. Depending on the course being taught, the instructor may provide works written by Deaf or hard of hearing authors, and invite classroom collaboration and reflection on the material taught.

Instructors must not only be aware of their space within the class, but their Deaf students’ abilities, and the ways they acquire knowledge. They must realise that, for Deaf students, reading is difficult because it highlights a new way of thinking. It becomes important to make the connection between the theory of language and epistemology. The Deaf cannot rely on spoken language alone, and so their language skills are not as developed as those of the hearing culture. Teachers must address the intent of the writer being discussed to their students, so that the students conceptually organize the text in order to comprehend its meaning. The class, with the help of the instructor, should break the silence that has been relegated to the Deaf. As Davis (1995) reminds
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us, “in sign language, as in written or printed text, there is no silence. There can be stillness in sign language or in print there can be blank space” (p. 112). Silence is a fabrication by the colonizer that wishes to silence his/her subjects of colonization. It is this silence that the third ear battles against. As I mentioned earlier, the instructor must be aware of the reality of his/her Deaf students’ subject positions before embarking on teaching them. Educators must develop a relationship based on understanding with their Deaf students, rather than one based on behavioural differences. As such, instructors must become conscious of their Deaf students’ positions as second-language writers. Anderson (1993) explains the Deaf students’ difficulty in grasping this new language, since “most deaf people do not know how to get around verbally in hearing communities and eventually stop trying” (p. 35). While the semantic structure of English will remain difficult, even unavailable to some Deaf students, they can still communicate their thoughts and experiences in the mainstream classroom depending on how the instructor presents his/her lessons and/or assignments. To do so, the teacher would have to subvert educational bureaucracies that only value acoustically-based languages.

Realizing that English is a second language for Deaf students, institutions should validate Sign language as a language, one that shapes the identity of Deaf persons, since our identities are created socially and largely by language. Many universities offer language courses in German, Latin, French, and Italian to name a few, but why not a class in Sign language? As a first step, more universities should take the lead of York University’s Department of Languages, Literature and Linguistics which offers credit in courses in American Sign Language (ASL), though not a degree program or certificate in ASL. Learning sign language is not merely a way of communicating in another language, but revolutionizes how we think of language. The integration of a Sign language course at universities will be beneficial for all students. It allows for an appreciation for difference, and recognition of the difficulties of becoming bicultural. A class in Sign language would denote the beginning of a pedagogically inclusive framework which sets to balance the unequal distribution of power.

The classroom – a smaller space than the university that can foster the full practice of democracy – should further dislocate the colonizing of Deaf students. Change begins with a collective self-consciousness pertaining to the facilities available on campus, as well as a professor’s self-acknowledgement of diversity within the class. The third ear establishes a politics of inclusion by exceeding the confines of verbal communication in a classroom at the post-secondary level.

References


**Biography**

Zeinab McHeimech completed her Masters in English Language and Literature at the University of Windsor. Her latest project in English explored the role of Enargeia and epistemology in Early Modern Travel and Zoology texts. She is currently conducting independent research investigating the impact of Tarab music on literature, focusing largely on Beat writers in Tangier.
Encouraging Undergraduate Class Participation: 
A Student Perspective

Nichole S. Wright, Marcia N. Gragg, & Kenneth M. Cramer
University of Winsor

Undergraduate classes typically involve a professor lecturing to 100 or more students. Too often, this results in minimal opportunities for student participation. Positive reinforcement was used to promote student participation (i.e., defined as relevant comments or questions) in a second-year psychology class (N = 97). Class participation was measured for five weeks in two 80-minute lectures per week. Baseline was collected in two lectures. In the unaware phase for two lectures, paper tickets were given without explanation to students who participated. Students were then informed that tickets were given for class participation, and would be entered into a draw for gift certificates. Data were collected for four lectures in this informed condition. Final baseline consisted of two lectures with no tickets distributed. Student attendance was recorded. Frequency of instructor questions remained relatively consistent. Class participation rose from 38 relevant comments and questions per week during initial baseline, to 47 during the unaware phase, 52.5 during the informed phase, and 60 for final baseline. Positive reinforcement was associated with increased class participation overall, but with little change for students with high initial participation. Students said they enjoyed and benefited from the class participation activity.

Introduction

Active class participation has been found to contribute to student learning (Michael, 2006). However, most undergraduate classes involve professors lecturing to large classes of 100 or more students. This format affords few opportunities for active engagement. Upper-level classes are often smaller, and students can be encouraged to actively express their ideas. Even so, one student wrote in a class poll, “For many of us being in fourth year, we have gotten used to just listening in class and not participating much.” I (Nichole) was inspired to conduct the current study while taking a
fourth-year *Behaviour Modification* course taught by the second author (Marcia). Previously in my educational career, I rarely voiced my opinions or questions during class although I achieved excellent grades. Usually, only a few students per class willingly and frequently participated. In *Behaviour Modification*, Marcia reinforced student participation with paper tickets worth participation points. Points tallied throughout the semester contributed to 20% of the final grade. Positive reinforcers are stimuli presented immediately after a behavior that increase the likelihood of the behavior reoccurring, and backup reinforcers are delayed positive reinforcers paired with an immediate reinforcer (Cooper, Heron, & Heward, 2007). In this class, the positive reinforcer was the participation point given immediately following a student participating, while the backup reinforcer was the percentage of the final grade.

In this situation, I began to eagerly share my ideas and insights. The ticket reinforcers in Dr. Gragg’s class introduced me to the potential of active class participation. I began to question why participation was uncommon in larger undergraduate classes.

This study investigated whether positive reinforcement could increase participation in a larger second-year class. Class participation was defined as students’ relevant questions or comments during lectures that contributed to whole group discussions. I used a token system to reinforce class participation, so students accumulated participation tickets for a draw to win prizes. We expected participation to increase when students were reinforced immediately and also with backup reinforcement.

**Method**

**Participants**

Participants were recruited from a second-year psychology class with 97 registered students in second to fourth year, at the University of Windsor. I was the teaching assistant, and interacted often with the course instructor.

**Procedure**

The course instructor and the Undergraduate Psychology Ethics Committee approved the study.

Class participation was defined as students’ voluntary verbal comments, questions, or responses that contributed to the topic. Incorrect responses that attempted to contribute to class discussions were recorded as participation. Participation was not counted when students simply raised their hands, requested repetition of material, or answered a question directed to a specific student. During three lectures with non-standard formats (i.e., group activity, brief movie, and discussion of the midterm and final paper), participation was recorded only for original comments or questions and not for ‘housekeeping’ talk.

Student attendance and the total number of participation responses for the class were recorded for each lecture. Frequency of participation was also recorded individually for each participant identified during baseline as an initial high-participating student.

The total number of instructor cues for participation was recorded for each lecture. This included the instructor asking questions to the group or giving opportunities for students to ask questions or comment about topics. This did not include instances when the instructor provided a scenario and asked students to simply raise their hands if they agreed or disagreed.

Before the study began, the instructor agreed to maintain a consistent level of opportunities for class participation in each lecture. Data on class participation were collected over five weeks in mid-semester, with two lectures per week, in four phases. The initial baseline phase lasted for two lectures with no participation tickets. During the unaware phase for two lectures, tickets were awarded without explanation to students for participating. Participants were encouraged to keep the tickets. The informed phase lasted for four lectures after I explained the purpose of the tickets in class and on the course website. The final baseline phase lasted for two lectures, with no tickets awarded.

Participation tickets were 6 1/2 x 10 cm pieces of coloured paper with two identical numbers. Half of each ticket was given to the participant, and the second half kept by the investigator. Numbering
the tickets gave an accurate total of tickets distributed without personal information on who earned each ticket. After the study, students entered their participation tickets in a draw for a $20 bookstore gift certificate or a $10 coffee shop gift certificate.

The classroom was a lecture hall with a semicircle layout. I sat at the back to distribute participation tickets with minimum disruption. Quickly and efficiently locating participants’ positions in the classroom to distribute tickets was challenging.

After the informed phase, I held a debriefing discussion, encouraging participants to share their comments or questions regarding their experience with the study. Participants received participation tickets for relevant comments or questions. The instructor completed a questionnaire regarding her experience with the study.

**Results**

Attendance at lectures ranged from 54 to 70 out of 97 registered students. As shown in Figure 1, instructor cues remained relatively consistent over the phases, with a slight increase in the final baseline. Frequency of class participation increased from baseline to the unaware phase, and again in week two of the informed phase, and stayed steady for the final baseline.

Baseline observation identified two active students, one male and one female, who initially offered more comments and questions. Individual participation rates for these active students remained relatively constant across phases (see Figure 1).

Students expressed mostly positive comments during the debriefing discussion. One student said, “after I read the online announcement, I started coming to class out of curiosity to see what the discussions would be about.” Participants thought reinforcement increased their awareness of their classmates’ comments and questions. Participants stated that listening to classmates increased their responsiveness to the lecture topic as well as questions and comments from other students and the instructor. They were attentive to questions posed by the instructor in order to contribute answers eligible for a participation ticket. Class participation allowed an opportunity to apply knowledge of the course material to personal experiences and consider information.
from differing perspectives.

The instructor indicated, “the experience heightened [her] awareness of the quality of questions [she] was asking when lecturing, as opposed to the quantity. It motivated [her] to introduce more interesting, discussion-based questions, as opposed to simple yes/no questions.”

Discussion

The purpose of this study was to determine if class participation increased with positive reinforcement. Participation was defined as participants’ comments or questions in class that related to the course content. Student participation in class was reinforced immediately with participation tickets and a back-up reinforcer of a draw for gift certificates. Class participation increased when the tickets were introduced and again after the purpose of the tickets were explained, and leveled off after reinforcement ended. Participants enjoyed and benefited from the class participation activity. Two active students, who showed high initial levels of participation, had relatively stable rates of participation across phases.

Several limitations in this study, including the small sample size and short intervention time, limit generalizability of the results. The level of class participation stayed relatively constant after reinforcement ended. It is possible that positive reinforcement resulted in a lasting increase in class participation, which was then maintained by students’ overcoming their initial reluctance or by natural reinforcers such as instructor praise and positive reactions from classmates. However, it is also possible that factors unrelated to reinforcement, such as student interest, the novelty of the procedure, or naturally increasing comfort levels were at play (although the study began in mid-semester). Future research could include longer follow-up after tangible positive reinforcers were withdrawn: the 8:30 a.m. class time may have resulted in less participation simply because it was too early in the morning.

The definition of class participation in this study was limited to relevant verbal contributions during lectures. Future research could investigate other forms of participation, including attending office hours, emailing, or contributing to class online chat, discussion groups, or wikis.

Participants mentioned that the ‘low-tech’ method of distributing tickets for participation was somewhat distracting. Future research could investigate other methods, such as electronic means, to distribute positive reinforcers with less disruption. Perhaps the “clickers” that students currently use to indicate answers to instructor-designed multiple-choice questions in class (Beekes, 2006) could be adapted to reinforce open-ended voluntary class participation.

The instructor welcoming student participation may have provided a comfortable lecture atmosphere where participants were willing to talk in class. Questions from the instructor may have cued students to respond, leading to a participation ticket. University education aims to promote independent active learning however, a lecture lacking active engagement ultimately positions the student as a passive learner waiting to accumulate knowledge from a superior, rather than an active constructor of knowledge (Michael, 2006). Lecture engagement is beneficial for both students and professors. Students’ quality of education may improve if they are encouraged to communicate with their professors and students in class.

In this study, participation levels for active or initially high-participating students remained relatively constant whether or not participation tickets were awarded. During the debriefing discussion, one active student mentioned the issue of internal versus external motivation, and stated, “I did feel that receiving an external reward for my internal motivation to participate did minutely deter my willingness to participate.” Some educators believe that students should participate without positive reinforcement, or that reinforcement may deter interested students from participating and decrease interest for externally motivated students when reinforcement ends. However, recent reviews of the research (Cameron, 2005; Henderlong & Lepper, 2002) conclude that positive reinforcement increases intrinsic motivation under many conditions; for example, when reinforcers are given for low-interest tasks, they are positive feedback or praise, and tangible reinforcers are given.
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for high-interest tasks and tied to successfully achieving various standards of performance.

Conclusion

Positive reinforcement was associated with increased class participation in a second-year university psychology class. Two students with high participation prior to the study maintained consistent participation over five weeks. Our hope is that encouraging participation earlier in students’ university careers will result in lasting increases in engagement in later courses. For me (Nichole), tangible reinforcement, generalized to natural reinforcers in subsequent undergraduate and graduate classes, has maintained my active engagement and intrinsic motivation to participate. From a student perspective, encouragement to participate can ultimately affect the quality of education.

References


Biographies

Nichole S. Wright is a masters candidate in Speech-Language Pathology in the Department of Communication Sciences & Disorders at Wayne State University, Michigan. Her scholarly interests are in early language development, and Speech and Language disorders.

Marcia N. Gragg is an Assistant Professor in the Department of Psychology at the University of Windsor, Ontario. Her scholarly interests are in Spectrum Disorders, behavioural interventions, and applying best practices from behavioural research in the community.

Kenneth M. Cramer is a 3M Teaching Fellow and Professor in the Department of Psychology at the University of Windsor, Ontario. His interests are in educational psychology, the impact of university rankings on university students, and lecture engagement strategies.
What's all the Clicking About? A Study of Classroom Response System Use at the University of Toronto

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Faculty Learning Community
University of Toronto

Classroom response systems (clickers) are used in many courses at the University of Toronto (U of T), primarily to introduce interactive pedagogy and to engage students in lecture courses. We examined the use of clickers in various courses at U of T and interviewed over 30 instructors about their use of clickers in classes with a total enrolment of over 5,000 students. Students in these classes were surveyed about their perception of the value of this technology. The objectives of our study were to evaluate the logistics of using clickers, the pedagogical value and associated teaching strategies, and students’ perception of its efficacy in their learning. We discuss some of the successes and failures of using clickers as a teaching and learning tool.

Introduction

Handheld classroom response systems (clickers) have become increasingly popular in undergraduate teaching as a tool for engaging students and enriching learning environments (Beatty, 2004; Carnevale, 2005; Crouch & Mazur, 2001; Duncan, 2005). Used during lectures, clickers provide prompt feedback on student comprehension and help clarify course topics (Beatty, 2004; Brueckner & MacPherson, 2004; Burnstein & Lederman, 2003; Dufrense et al., 1996; Mazur, 1997).

There are a variety of procedures for using clickers reported in the literature, but generally, the instructor presents students with a conceptual multiple-choice question (Reay et al., 2005) and allots a specific amount of time for students to answer the question before closing the voting. Typically, a discussion follows, and on occasion one or more post-questions are posed to check if students understand the concepts (Beatty, 2004; Crouch & Mazur, 2001; Mazur, 1997; Rao & DiCarlo, 2000).
The pedagogical method surrounding clicker use is described as a process that encourages and advocates “peer instruction” (Mazur, 1997), improves students’ problem solving abilities and performance on traditional quizzes (Rao & DiCarlo, 2000; Ruhl, Hughes & Schloss, 1987), and improves student engagement and learning outcomes (Beatty, 2004; Brueckner & MacPherson, 2004; Crouch & Mazur, 2001). It is also said to improve interactive classroom discourse, increase students’ active participation, and increase ownership of their learning (Beatty, 2004; Dufresne et al., 1996; Rao & DiCarlo, 2000), while it decreases student anxiety (Owens & Walden, 2001), lower level learning, and passive rote memorization of lecture material (Rao & DiCarlo, 2000).

There are a number of advantages and disadvantages of clicker use reported in the literature, but the most common reported advantage is that of increased student engagement, and the most common reported disadvantage is the administrative burden associated with the technology (for example, see Beatty, 2004; Burnstein & Lederman, 2003; Carnevale, 2005; Crouch & Mazur, 2001; Dufresne et al., 1996; Fies & Marshall, 2005; Mazur, 1997; and Rao & DiCarlo, 2000).

A systematic review of different clicker models suggests that many of the commercially available clickers are very similar (Burnstein & Lederman, 2003). In 2006, the University of Toronto (U of T) adopted a single clicker vendor for its three campuses, encouraging all instructors to use the same system.1 This decision enables students to purchase one clicker for multiple classes, and it allows the university to offer resources and training to faculty on one system. By the spring of 2008, over 60 instructors at U of T were using these clickers as part of their teaching, and the U of T bookstores were reporting sales of over 10,000 clickers per year.

We surveyed U of T faculty and students in order to determine the following:

- What types of classes are using clickers most successfully?
- What are the best pedagogical practices for teaching with clickers?
- What are the best logistical practices for the administration and use of clickers?
- Do students believe clickers help them learn?

Faculty Survey

We conducted 32 structured interviews to survey faculty from various departments (e.g., departments in the Faculty of Arts and Science, Faculty of Medicine, School of Management). All of the interviewees had some experience with clickers. We asked several questions about the nature of the classes for which they used clickers, the logistics of their clicker use, their teaching styles, and their opinions about the advantages and disadvantages of teaching with clickers. We chose this form of descriptive survey research to develop an in-depth, quantitative description of instructors’ use of clickers in the classroom. The resulting data and descriptive statistical analyses are presented below.

Logistics

Different instructors employed different practices regarding assigning marks for the use of clickers, as shown in Table 1. These data are consistent with what others have suggested (e.g., Crouch & Mazur, 2001; Dufresne et al., 1996); most instructors in this study used clickers to encourage participation; far fewer (19%) used them as an assessment tool.

While most instructors prepared clicker-questions before lectures, 50% of interviewees reported occasionally thinking of a clicker-question in the middle of a class and asking it. As others have suggested (e.g., Crouch & Mazur, 2001; Dufresne et al., 1996), this had the effect of livening things up, enhancing ideas, and helped in clarifying topics, but instructors in this study reported that for the spontaneous questions to be effective, they had to be simple.

1 The University of Toronto chose i>clicker as their preferred vendor: http://www.iclicker.com/.
Table 1
Some Results of the Faculty Interviews (n=32)

<table>
<thead>
<tr>
<th>Do you give students marks for the use of clickers?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No marks at all; clickers voluntary</td>
<td>31%</td>
</tr>
<tr>
<td>Yes, for participation and/or clicker registration only</td>
<td>50%</td>
</tr>
<tr>
<td>Yes, and correct answers contribute more to marks than incorrect answers</td>
<td>19%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>What types of clicker questions do you ask?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual</td>
<td>84%</td>
</tr>
<tr>
<td>Fact checking</td>
<td>78%</td>
</tr>
<tr>
<td>Ones which do not necessarily have a right answer</td>
<td>56%</td>
</tr>
<tr>
<td>Surveys about the class</td>
<td>50%</td>
</tr>
<tr>
<td>Indication of student confidence in answer</td>
<td>13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you expect/encourage/allow students to discuss a clicker question amongst themselves before/after they vote?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, both before and after</td>
<td>63%</td>
</tr>
<tr>
<td>No, neither before nor after</td>
<td>13%</td>
</tr>
<tr>
<td>Yes before vote, but not after</td>
<td>15%</td>
</tr>
<tr>
<td>Not before vote, but yes, after</td>
<td>9%</td>
</tr>
</tbody>
</table>

The clicker polling procedures that instructors reported in this study resemble a variety of procedures that others have discussed in the literature (e.g., Beatty, 2004; Crouch & Mazur, 2001; Rao & DiCarlo, 2000). Instructors typically gave students between 30 seconds and one minute to answer a question before closing the voting. If calculations were involved, longer times, such as up to two or three minutes were allowed. All but one of the interviewees tended to show the class a histogram of the results of each vote immediately after the voting for a question was closed. About one third of the interviewees had occasionally showed the class a histogram of results during the vote, so that the students could actively change their answer and to see the effect on the histogram in real time. This introduced the potential of a histogram influencing a vote. One economics professor reported using this technique to teach about ‘herding’ and to emphasize the value of independent thinking.

As shown in Table 1, the majority of interviewees said that they often expected, encouraged, or allowed students to discuss a clicker question both before and after voting. Of the faculty who did not allow discussion before the vote, this was usually because the correct answer counted for marks. One instructor regarded discussion as cheating, but felt that “it was probably happening anyway.”

Pedagogical practices
Faculty were asked what types of questions they used with the clickers; the results are shown in Table 1. Consistent with what others have discussed (e.g., Reay et al., 2005), the majority of interviewees responded that they used clickers to ask conceptual questions; 12.5% of interviewees said they sometimes asked a question, and then, before giving the answer, asked the students to report their level of confidence in their own answer.
For questions that do have a correct answer, not all faculty were expecting or hoping that a large majority of students would get the correct answer; 34% of interviewees indicated that they were aiming for approximately 50% correct answers, citing peer instruction as a motivation for striving for this average. A lower correct response rate seemed to promote the vote – discuss – then vote again process described above.

We asked faculty who were new to clickers about what changes they might make to their pedagogy if they were to use clickers in the future. Most responded they would put more effort into formulating questions, include more conceptual questions as opposed to fact-checking, and encourage discussion before the vote. Some instructors were planning novel ideas, for example incorporating animations, graphs and math tools to teach various concepts such as game theory (e.g., prisoner's dilemma). Many of the faculty interviewed in this study reported that they had not previously thought about many of the issues raised in the interview, and said they would change their future teaching practices with clickers based on our interviews.

**Advantages of clicker use**

Consistent with what others have reported (Beatty, 2004; Burnstein & Lederman, 2003; Carnevale, 2005; Crouch & Mazur, 2001; Dufresne et al., 1996; Mazur, 1997; Rao & DiCarlo, 2000), the most common advantage of clicker use, reported by 69% of our interviewees, was that of student engagement. By using clickers, students are forced to think and make a decision in class, and this helps to engage them with the material.

Of the other advantages reported, the most common were:

- The instructor receives quick feedback on student understanding of course material.
- The students receive quick feedback on their own understanding and how they compare to the rest of the class.
- Clicker use helps stimulate in-class discussion and peer instruction.

- Clickers engage all students equally, including the quieter ones who would not normally be involved in a spoken discussion.

**Disadvantages of clicker use**

Again, consistent with the literature (e.g., Beatty, 2004; Burnstein & Lederman, 2003; Fies & Marshall, 2005), the most common disadvantage of clicker use reported by faculty was the administrative burden associated with the technology. This included registering student identification with clicker frequency, enforcing policies about lost or forgotten clickers, and tabulating and posting clicker marks. Other common disadvantages reported were the extra time and energy instructors needed to devote to lecture preparation in order to use clickers effectively, and the fact that stopping the class for a clicker vote takes away from class time, so that less material can be covered.

Most instructors agreed that they would not use clickers in small classes, such as those with fewer than 30 students. The administrative burden and other disadvantages outweigh the advantages in these small classes. In larger classes, such as 70 or more students, the advantages are felt to outweigh the disadvantages.

**Correlations between Teaching Practices and Student Experience**

We asked all of our faculty interviewees if they would survey students in the classes in which they were using clickers. Students were asked whether they liked using clickers, and whether they believed using clickers helped their learning. These surveys were conducted in class using clickers. In a pilot student survey, involving three classes with a total of 670 students, responses were simply phrased as yes/no. The majority of students in all three classes said “yes” to both questions. In a larger student survey, involving 6 classes with a total of 715 students, a 4-point scale was used to indicate the level which students liked the clickers and the level which they thought clickers helped them learn. The data from the 4-point scale
were collapsed to match the binary (yes/no) scale of the pilot data. The results for all nine classes are shown in Table 2.

The results of the student surveys in all of the 9 classes were compared to some of the reported teaching practices of the interviewees. We performed logistic regression analyses to determine the likelihood of students reporting that “yes”, they like using clickers and that “yes” they believe clickers help them to learn, given certain teaching practices, as reported in the faculty survey. The student data were compared to the data of the following four binary (yes/no) questions posed to the instructors of these nine classes:

1. Do you expect/encourage/allow students to discuss a clicker question amongst themselves before they vote?
2. Do you ever think of a clicker question in the middle of a class and ask it?
3. Do you ever display a histogram of vote results while voting is going on so the students can see the results while they can decide on or change their answer?
4. Do you ever have students discuss a clicker question after they have voted?

The likelihood of being able to predict students liking clickers and believing that clickers help with learning based on instructors teaching practices was evident in three of the four teaching practices questions. As shown in Figure 1, it is likely that students will believe that clickers help their learning if instructors allow them to discuss a clicker question amongst themselves before they vote. As shown in Figure 2, it is likely that students will believe that clickers do not help their learning if instructors allow students to discuss a clicker question after they have voted.

### Table 2
Results of Student Surveys in Nine Classes

<table>
<thead>
<tr>
<th>Do you like using clickers?</th>
<th>total # of students</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall ’07: Intro. Psychology, Geology, Physics</td>
<td>670</td>
<td>65%</td>
<td>28%</td>
</tr>
<tr>
<td>Spring ’08: Physical Education, Astronomy, Civil Engineering, Psychology, Chemistry</td>
<td>715</td>
<td>27% + 41% = 68%</td>
<td>14% + 14% = 28%</td>
</tr>
<tr>
<td>Loved it</td>
<td>Liked it</td>
<td>Disliked it</td>
<td>Hated it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you believe clickers help you learn?</th>
<th>total # of students</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall ’07: Intro Psychology, Geology, Physics</td>
<td>670</td>
<td>69%</td>
<td>30%</td>
</tr>
<tr>
<td>Spring ’08: Physical Education, Astronomy, Civil Engineering, Psychology, Chemistry</td>
<td>715</td>
<td>13% + 34% = 47%</td>
<td>32% + 20% = 52%</td>
</tr>
<tr>
<td>A lot</td>
<td>A fair amount</td>
<td>Just a bit</td>
<td>Nothing</td>
</tr>
</tbody>
</table>
Also, as shown in Figure 3, it is likely that students will believe that clickers do not help their learning if instructors display the histogram while voting is going on and students can see the results while they can decide on, or change, their answer. These results suggest that students believe that dis-

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**Figure 1**

*Summary data of instructor’s allowing students to discuss a clicker question before the vote (Y/N), and students’ opinion that clickers help learning (histogram)*

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**Figure 2**

*Summary data of instructor’s allowing students to discuss a clicker question after the vote (Y/N), and students’ opinion that clickers help learning (histogram)*
discussion of questions before a vote is helpful to their learning, but that discussion of questions after a vote is not helpful to their learning. A possible explanation for this might be that students perceive this post-vote discussion to be frivolous and this takes away from class time that could be used to cover more material. Also suggested here is that students believe they will not learn more just because instructors display the histogram during a vote. Again, it might be that students regard this practice as a frivolous use of the technology, and again, detracting from time and focus in the lecture that could be spent going over different material.

Conclusions

There are many ways to use clickers in the classroom, as well as many reasons to use or not use them. As demonstrated in this study, and as Beatty (2004), Brueckner and MacPherson (2004), and Roschelle, Penuel, and Abrahamson (2004) have also reported, most often, students like them. For students, the value of using clickers is greatly determined not only by how, logistically, the technology is used, but more importantly, how and why, pedagogically, it is used by the instructor. Beatty (2004), Brueckner and MacPherson (2004), and Mazur (1997) also suggest this.

References


What’s all the Clicking About?

of Higher Education, 51(42), B3.


Biography

The Faculty Learning Community is an informal group comprised of teaching and research faculty at the University of Toronto, Ontario, who engage in an active collaborative program regarding undergraduate education. Each year, the group decides on a theme and carries out either individual or group projects to investigate various aspects of that theme.
Enhancing Undergraduate Critical Reading Skills in Neuroscience Using Instructor-Developed Study Guides

Andreea Moraru
University of Toronto

Janelle C. LeBoutillier
University of Toronto Scarborough

This study proposes an innovative instructional method for enhancing critical reading skills. Students enrolled in an undergraduate neuroscience course offered at the University of Toronto Scarborough reported that they often experience difficulty in analyzing and interpreting empirical and review journal articles. Our research focuses on student attitudes and perceptions of learning following exposure to instructor-developed study aids based on course readings from various scientific journals. The results of this study can be translated across disciplines to courses that use journal articles as part of the reading requirements, and can further impact course development to better facilitate student learning.

Introduction

Learning and Motivation is a third-year half-credit lecture and tutorial course offered at the University of Toronto Scarborough (UTSC) as part of both the major and specialist programs in Neuroscience. Tutorials are intended to familiarize the students with the general knowledgebase of neuroscience, namely the published literature. However, based on previous course feedback, the vast majority of undergraduate students enrolled in Learning and Motivation experience difficulty analyzing and interpreting empirical and/or review journal articles due to the emphasis on methodology, the abundance of results from previous studies, and the heavy use of scientific language (Anderson, 1992; Hartley, Trueman, & Meadows, 1988).

Lectures and tutorials are focused on delivering course-specific content, and typically, minimal class time is dedicated on developing higher-level thinking and article-analysis skills (Kreber, 2002; Lopez & Whittington, 2001; Steele, Medder, & Turner,
To date, previous research on teaching and learning in the sciences has not addressed the importance of developing study aids to enhance critical analysis skills when reading scientific journal articles. Furthermore, the use of student feedback at midterm and at the end of term has not been documented. This paper summarizes an innovative instructional technique that aims to improve critical reading skills in undergraduate neuroscience students, and has the potential to be translated across multiple disciplines and courses that rely on scientific journal articles as part of their reading requirements.

Objectives

The current study had three main objectives: 1) to develop a series of content-related questions based on the assigned article readings to be used as study aids, and to examine student attitudes and perceptions of learning; 2) to evaluate students’ ability to write potential exam questions following prior exposure to instructor-developed study aids; and 3) to evaluate the ability of students to rate potential exam questions written by themselves and their peers, based on difficulty and fairness, to be included on a course exam.

Research Methods

Each week, from September to November, 2007, the questions for 13 of the 16 assigned scientific articles were posted on the course’s website. These questions identified the essential concepts in the articles and served as a guideline for student learning and comprehension of the readings. In October, as part of the mid-semester evaluation, a voluntary and anonymous feedback questionnaire assessed the usefulness of the study aids, frequency of use, whether or not the weekly study guides improved concept learning, and the students’ study habits. By mid-semester evaluation, four instructor-developed study aids had been provided to the students.

Subsequently, students were asked to write potential exam questions (multiple choice and short-answers) for two assigned empirical papers without study guides. This was not a mandatory assignment, but the students who submitted both the questions and answers received 1% bonus mark added onto their final grade. We hypothesized that following exposure to the instructor-developed study aids students would mimic the guides, identify the important concepts, and integrate these content-related keywords to form clear and well-structured questions.

The student-submitted questions were selected and re-organized into PowerPoint slides consisting of 15 multiple-choice and seven short answer questions. During an in-class exercise, the slide show was presented and students were asked to rate the questions written by themselves and their peers based on the following choices:

- a) Too difficult and unreasonable to use on the NROC61H3 final exam.
- b) Moderately difficult but fair enough to include on the NROC61H3 final exam.
- c) Moderately easy and fair enough to include on the NROC61 final exam.
- d) Easy! Please include this on the NROC61 final exam.
- e) No opinion.

This assessment was conducted during the tenth week of the twelfth-week course. The student-submitted questions included in this assignment were made available to all members of the class prior to the final exam. At the end of the course, the students who participated in the rating exercise were given an anonymous survey to determine whether the questions written by themselves and their peers were effective study tools for the final exam.

Research Findings

Eighty-nine percent of respondents (33 of 37 students) found the study aids useful. Eighty-six percent (32 of 37 students) believed that the study guides improved their ability to identify important concepts in the articles (Table 1). Student feedback included the following comments:
I found the questions very useful.

The question sheet was designed in a very constructive way. It really streamlined the focus of the article when studying them.

I think the journal questions were quite good in helping us to break down the articles.

The questions were well-written to help us understand the articles. A couple of multiple choice questions may be helpful.

Sixty-eight percent of students submitted the voluntary assignment consisting of both short answer and multiple choice-type questions with an answer key and mark breakdown included. The trends illustrated clear, concise, well-written, and well-structured questions that were similar to the instructor-developed study aids.

Results of the in-class question rating exercise indicated that students found most of the questions written by themselves and their peers moderately difficult and fair enough to use on a course exam. However, a few exceptions were noted. The questions that were considered to be ‘easy,’ required rote memorization or straight recall of facts such as numbers or common brain structures. Two examples of such questions are provided:

1. According to Fields & Douglas (2004), the ratio of glial cells to nerve cells is:
   a) 100 to 1
   b) 1 to 100
   c) 9 to 100
   d) 9 to 1
   e) None of the above

2. A patient can no longer retrieve long-term memories, a condition known as retrograde amnesia, when the ____________ is damaged.
   a) Cerebral Cortex
   b) Hippocampus

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Data on the Journal Article Study Guides</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td><strong>Usefulness</strong></td>
</tr>
<tr>
<td>33</td>
</tr>
<tr>
<td><strong>Study Habits</strong></td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td><strong>Looking at the Questions</strong></td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td><strong>Concept Learning</strong></td>
</tr>
<tr>
<td>32</td>
</tr>
</tbody>
</table>
c) Cerebellum  
d) Basal Ganglia  
e) Amygdala

Questions that were perceived to be too difficult and unfair to use on a final exam required ordering a complex sequence of events or detailed explanations of scientific experiments. Two examples are provided below:

1. What is the correct chronological order that underlies the involvement of astrocytes in the regulation of neuronal signaling:
   i. An influx of calcium is triggered into astrocytes
   ii. An axon prepares to transmit a signal to a dendrite
   iii. The release of a neurotransmitter and chemical ATP from the axon terminal
   iv. The release of signaling molecules from astrocytes causing the axon to decrease the amount of neurotransmitter it releases when it fires again
   v. As a result, astrocytes communicate among themselves by releasing their own ATP
   vi. The signal is weakened by astrocytes due to the secretion of proteins that bind to the neurotransmitter preventing it from reaching its target
   a. 2, 1, 5, 3, 6, 4  
   b. 2, 1, 3, 4, 6, 5  
   c. 2, 4, 1, 5, 3, 6  
   d. 2, 3, 1, 5, 6, 4  
   e. 2, 3, 6, 4, 1 5

2. Describe the research by Damasio, Jones, and Tranel on regions of the brain that require the placement of memories in the correct epoch. Discuss the researchers’ objectives, methods, results and findings.

When surveyed about the effectiveness of the student-written questions, 58% of respondents (35 of 60 students) indicated that both the multiple choice and short answer questions were effective study tools for the final exam, while 28% thought they were not useful (Figure 1).

**Research Implications**

Our data suggests that study aids based on empirical and review journal articles are helpful for undergraduate neuroscience students in developing concept learning. The instructor-developed study guides are successful in helping students extract important concepts from the articles and improving their ability to write concise, well-structured questions. This indicates that students implement what they have indirectly learnt from the study aids and experience enhanced academic competence. Furthermore, respondents’ comments are a good indicator that concept-based study guides are effective resources in helping students interpret journal articles.

We propose a three-step pyramidal model of learning: metacognitive concept-based learning that emphasizes a structured approach to analyzing and interpreting scientific articles (Figure 2). The bottom
step of the pyramid emphasizes the understanding of concepts like keywords or definitions. When the students become familiar with these important terms, they will reach the second level and will integrate the learnt information. The students’ ability to formulate questions such as why a certain phenomenon is occurring or how two or more concepts are related is a learning outcome. Learning takes place at the top of the pyramid and is defined by repeating the first two steps in order to consolidate the information. More importantly, learning refers to metacognitive learning outcomes – specifically the ability of students to monitor, change, and adapt their learning strategies (Ridley, Schutz, Glanz, & Weinstein, 1992).

This innovative model is similar to Bloom’s (1956) taxonomy in its assessment of learning outcomes and its communication of expectations to students. The first level of the pyramid encompasses the first two learning outcomes of the taxonomy: knowledge and comprehension. Level two is reminiscent of Bloom’s application and analysis, while learning (level three) emphasizes synthesis and evaluation skills. Both models are hierarchical and thus provide structure to students and instructional designers (Jonassen & Tessmer, 1997). However, unlike Bloom’s taxonomy, the metacognitive concept-based model is not a static entity; it provides flexibility and structure to both students and instructors, and articulates the development of higher order thinking skills. It integrates learner-controlled thinking or metacognition by providing a step-by-step approach from mastering key concepts to synthesizing questions that test the ability to apply and analyze specific content.

An important issue in undergraduate education is for students to learn critical reading skills earlier on, preferably in the first or second year of their studies. To maximize academic success, students should transition from novice to expert learners earlier rather than later (Ertmer & Newby, 1996). Therefore, it is recommended that instructors implement empirical readings and metacognitive learning outcomes in introductory higher education courses to allow for the development of critical thinking skills.
References


Biographies

Andreea Moraru is a Teaching Assistant in Neuroscience at the University of Toronto, Ontario, where she earned her Master of Science. Her pedagogical research interests include the implementation of education policy and program change, program evaluation, and leadership in higher education.

Janelle C. LeBoutillier is a Senior Lecturer in the Department of Psychology at the University of Toronto, Scarborough campus, with teaching interests in both the psychology and neuroscience domains. Her pedagogical research interests are mainly in learning and memory and include curriculum evaluations, learning outcomes in laboratory and tutorial courses, and peer assessments.
Promoting Inclusive Education 
Through the Lens of Learning Disabilities

Elizabeth Santhanam & Wendy Paulusz
Monash University

The Faculty of Engineering in an Australian university collaborated with a central academic/educational development unit to design and deliver a teaching development program for all engineering teaching assistants (TAs). This paper discusses the approach taken to promote inclusive education in engineering in a situation with competing priorities. One of the strategies employed in the program aimed at enhancing the TAs’ awareness of the diversity of learning styles and abilities within their student cohort with particular reference to students with a learning disability or a mental health condition. Research (Mortimore, 2003) has shown that certain learning styles can be characteristic of a learning disability or mental health condition. A standard learning styles inventory tool was introduced so TAs could identify their own preferences and realize the learning environment can be ‘disabling’ when there is a mismatch between a learning preference and teaching style. Through discussions and activities, TAs developed inclusive teaching strategies which could facilitate learning for all students. The program provided opportunities to discuss other issues related to diversity among students and other members of the university community, and effective communication skills. Changes in the attitude of the engineering TAs and faculty towards this program are discussed.

Introduction

Induction of teaching assistants (TAs) to support teaching and learning in higher education is a common practice in the US and Canada. The expectation in North America is that all graduate/postgraduate students who plan to become academics in universities and colleges should gain their initial teaching experience through the role of a TA. Programs to support the teaching development of TAs are generally provided through a central unit in the institution. The preparation for future academics to teach is less structured in many other countries, such as Australia. Frequently, TAs are expected to have the knowledge
and skills to teach a subject by virtue of having been an undergraduate student in the relevant discipline area. While many Australian universities are attempting to introduce a more structured and standard approach to support the teaching development of TAs, and the teaching development programs generally touch upon student diversity, rarely do the programs attempt to discuss issues associated with learning disabilities. This essay outlines a teaching development program that introduced not only the more obvious issues of diversity (e.g., cultural and language background), but also the issues related to learning disabilities. The program was designed and offered by a central support unit for all TAs in the Faculty of Engineering at an Australian university.

Background

The outcomes of two major projects in Australia, that investigated support for those who are employed by universities to teach on a temporary (non-tenure track) basis, showed that few institutions provided comprehensive support for teaching development of the sessional teachers (Australian Learning and Teaching Council [ALTC], 2008; Australian Universities Teaching Committee [AUTC], 2003). The first study reported that TAs were often employed as tutors or demonstrators with very little support for professional development (AUTC, 2003). The second study found an improvement in the support made available to TAs, but the support was still far from comprehensive (ALTC, 2008). Another investigation that focused on the “provision of professional development for university teaching” identified different types of programs or courses, and states that:

despite the central importance of teaching in higher education, and our growing understanding of how to support the development of teaching expertise, the way we prepare and support staff for their teaching role in universities remains largely unsystematic and ad hoc. (Dearn, Fraser & Ryan, 2002, p.1)

Monash University is the largest and most international university in Australia, with six onshore campuses and two offshore campuses. In 2006, the Faculty of Engineering at Monash University decided to collaborate with the Centre for the Advancement of Learning and Teaching (CALT) in order to provide a teaching development program for all TAs in the faculty. The TAs were required to attend the program which was offered over two days before the start of the semester in 2007. The program consisted of four modules and there were no electives. Each module was about two and half hours long to explore the following themes: facilitating learning, diversity and inclusive teaching, communication skills, and planning for teaching and classroom management. While there were changes in the sequence of modules and the module facilitators in 2007, the program content and delivery have been relatively stable. The topic of ‘learning disability’ was introduced in the identification of student diversity. The rest of this essay will explain the exploration of learning disability in the program and the module’s pathway from skepticism to interest among the TAs and others in the Faculty of Engineering.

Why Consider ‘A Learning Disability?’

Recognizing the obvious diversity in student backgrounds, in particular with the phenomenal growth in international students at both undergraduate and postgraduate levels, teaching development programs for TAs have included a component to discuss diversity (Dysievick, 2007). However, the focus has tended to be on cultural and gender related issues; rarely do they touch on the hidden differences, such as learning preferences. Nevertheless, it has been found that the accessibility to university and successful completion of courses by students with a disability, are largely dependent on the attitudes and competencies of teaching staff (Norlander, Shaw, & McGuire, 1990). Successful educational outcomes, particularly for those students experiencing difficulties with learning depend on teachers adapting instruction to accommodate individual difference (Glaser, 1977;
Mortimore, 2003). As there has been an increase of 88.1% in the number of students with a learning disability since 1996 (from less than 5% to more than 30%), training faculty members and TAs on adopting a more inclusive teaching approach has become imperative.

**Promoting Awareness of a Learning Disability in the ‘Diversity and Inclusive Teaching’ Session**

The session, which is highly interactive, consists of a range of experiential activities and discussions. The outline of what is covered is given below.

In order to increase the TAs’ awareness of diverse learners’ experiences in the classroom, an empathy exercise is used. One such exercise uses an innovative computer software package that simulates visual processing difficulties, which can be experienced by both dyslexic and non-dyslexic people (Beacham & Szumko, 2005). The purpose of this empathy exercise is to highlight how it feels to be unable to decode written (or verbal) information quickly enough and the frustration, anxiety, and tension such a situation causes especially under test conditions. However, the main focus of the session continues to be on how TAs can create a more ‘enabling’ and inclusive environment for all students rather than emphasizing individual learning problems students might have, as TAs are not qualified to make a differential diagnosis of individual students’ needs. Before investigating features of a universal instructional design, the TAs are asked to complete a “learning styles questionnaire” based on the “Index of Learning Styles” (Felder & Silverman, n.d.) so they can reflect on their own preferences and the diversity within the group attending the session. TAs are facilitated to reflect on how their own learning preferences influence their assumptions and expectations of the way students might receive feedback, and also influence how they instruct. TAs are then shown a DVD (a video is also available) of students discussing their learning issues (Eaton Coull Learning Group, 2003).

After the screening of the DVD, the TAs discuss the learning issues and characteristics of the students shown in the DVD. Then they work in small groups to develop strategies which would make their lesson content more accessible to diverse learning preferences, including students with a learning disability. Each small group then presents its strategies to the whole group for further discussion and comment, so that the session participants can exchange ideas, support each other, and take this learning back to their respective classrooms.

The program participants identified inclusive teaching strategies, such as giving an outline of what will be covered at the beginning of the session and summarising key points at the end; emphasizing (bold or underline) key words in written text and repeating key words during session; using graphs, charts, pictures, and models to support verbal and kinaesthetic activities; modulating voice; breaking up the session; and using humour appropriately. The session also provides a resource kit of information for teaching staff and where to go for further help. Online support is available in the form of the “Inclusive teaching for diverse learners” website which showcases inclusive teaching practices of some faculty members at Monash (Monash University, n.d.). The website also includes advice from the Disability Liaison Unit at Monash regarding equity and disability.

**Discussion**

Feedback from the TAs has been very positive so far; more than 95% of those who responded to the feedback survey (representing 76% program participants) said they were ‘very satisfied’ or ‘quite satisfied’ with the module, indicating a greater awareness of the importance of a multi-sensory approach to accommodate the different learning styles of their students. The methodology used to facilitate a shift in thinking is a combination of motivational interviewing, solution-oriented counselling, and ontological coaching (Miller & Rollnick, 2002; O’Hanlon & Weiner-Davis, 1998; The Newfield Network, 1996). The techniques include using open-ended questions,
listening reflectively, challenging assumptions and expectations, and active learning strategies. As a result, TAs have expressed a better understanding of inclusive teaching and its benefits to all students, thus removing the fear of having to provide individualized instruction for every student with a hidden disability. In addition, TAs' comments suggest that they have developed greater confidence when working with diverse learners who can be seen to add value to the classroom and not to be feared. A number of TAs stayed to discuss issues related to learning disabilities after the formal conclusion of the module.

Anecdotal feedback from faculty members has also been positive. This is particularly rewarding, since not everyone welcomed the introduction of a mandatory teaching development session for TAs, initiated by the Associate Dean responsible for teaching and learning in the Faculty. We became aware that some senior faculty members felt that their doctoral students should be exempt from the program, as there was very limited time to complete their doctoral research work. Apparently many program participants had mentioned to the senior faculty members that the program was useful to them, and that recently the senior faculty members have shown more support for the program. However, further investigation is necessary to identify the level of support for the program among the faculty, and the impact this program may have had on TAs' performance in class.

In the early plans for the program, many stakeholders were of the view that the emphasis should be on communication issues related to lack of proficiency in the English language; most TAs in engineering were international students and many were from non-English speaking backgrounds. While the language difficulties and adjustment to different cultures are still an important part of the program, the interest generated during discussions of learning disabilities shows that there is a genuine need for its inclusion in the program. In order to create greater awareness of learning disabilities, a program for tenured faculty should be considered. This step, of course, requires long-term commitment from more senior faculty members.

Conclusion

The paper outlines an approach that was taken to promote awareness of learning disabilities among those who have the opportunity for close contact with individual students, i.e., the TAs. The primary purpose of the approach was to create a more inclusive teaching and learning environment. The initial skepticism that was evident among TAs and some faculty members, with regards to the program and in particular the inclusion of discussions on learning disability, has appeared to have receded. The program has been conducted before the start of every semester since its introduction at the beginning of 2007. There is now more acceptance of the teaching development program as a whole, and the component on learning disabilities embedded in one of the program modules.

References


**Biographies**

Elizabeth Santhanam is a Senior Lecturer at the Centre for the Advancement of Learning and Teaching, and has been coordinating the teaching development program for Engineering Teaching Assistants of Monash University, Australia. Her scholarly interests include coordinating sessional staff support, teaching development through structured programs, supporting teaching development of staff new to the University, and motivating high quality learning and teaching.

Wendy Paulusz is a Lecturer at the Centre for the Advancement of Learning and Teaching in Monash University, Australia. She is coordinating the ‘Inclusive Practices Project’ and works closely with the Disability Liaison Unit. Her scholarly interests include offering workshops to faculty and general staff on how to develop and apply innovative inclusive teaching approaches and delivering education, training, and change management sessions on diversity in the workplace to associated education organisations.
International students share a host of problems. For many, it is the first time they leave home and soon discover that their new host country has traditions, cultures, and educational standards that differ from their own. The initial excitement upon arrival is often followed by a difficult period of adjustment. As university instructors, we must reflect on our own practices and find new ways to provide better learning opportunities for our international students, ones that will also benefit our Canadian students. Practices that increase student engagement and internationalization in the classroom will have a positive effect on learning by all.

History and Origin of Internationalization

Throughout history, universities have been ‘international’ institutions. For example, during the first millennium, centres of scholarship arose in Egypt, Greece Persia, China, and Japan and foreign students were the norm, rather than the exception. This also applied to early European universities, but with the rise of the modern nation state between the 18th and the 19th centuries, international student numbers began to decrease and universities began teaching in national languages, rather than in Latin. Following World War II, international study was again fostered to help war-affected countries, those where educational infrastructure was rudimentary, and promoted international good will (Ward, Bochner, & Furnham, 2001). Currently, many universities encourage international study to provide students with an enriching experience and also, one that may ultimately improve employment opportuni-ties.

The number of students studying in higher education institutions outside of their home countries has grown dramatically over the past 10-15 years. The figure now approaches three million, a 50 percent increase since 2000 and a 200 percent increase since 1995 (OECD, 2008). This trend is accompanied by an increase in the number of students pursuing higher education globally. Over the past 25 years, the recruit-
ment of international students has become a growth industry. Some view internationalization as a way of filling university classrooms, but Aulakh et al. (1997) claim that the aim of internationalization should be to “produce graduates who are capable of solving problems in a variety of locations with both cultural and environmental sensitivity” (p. 15). In an internationalization survey carried out by the Association of Universities and Colleges of Canada (AUCC, 2006), 92 percent of respondents reported that their main reason for internationalizing their university was to “promote an internationalized campus and greater diversity on campus.” Generating revenue was rated important by only 62 percent of respondents, while only 10 percent commented that filling classrooms is the primary reason for recruiting international students.

In Canada, since 1995, the number of international visa students has more than doubled. By 2006, there were 70,000 full-time and 13,000 part-time visa students (approximately seven percent of full-time undergraduates and 20 percent of full-time graduate students). They originated from over 200 countries (AUCC 2007); Asian students accounted for almost 50 percent, and 44 percent of these were Chinese. About one-fifth of the visa students were European (around half from France) and 16 percent were from North and Central America or the Caribbean (Record, 2005).

Saint Mary’s University, Halifax, Nova Scotia, has over double the Canadian average of international undergraduate students (>16 percent in 2007-2008). The students come from over 80 countries, but almost 40 percent are from China. On campus, another 120 students study English at the Teaching English as a Second Language (TESL) Centre. In part, the large contingent of international students results from Saint Mary’s participation in international development projects in the 1980s, including the Chinese Language and Cultural Project and the MBA program at Xiamen University. To coordinate and support these programs, the International Activities Office opened in 1992. It worked with faculty and staff to develop and manage international projects but then extended its mandate to include group training programs and to market Saint Mary’s internationally.

In order to be successful, international students have to adjust to university, no matter where they come from. Indeed, it is clear from talking with international students over the past decade that they do adjust, some with more success than others. Many are not aware of the numerous support services available, perhaps because they are reticent about asking for assistance. International students can act as ‘indicators’ of the quality or success of university instruction. They point out aspects of teaching that are challenging to all students. If we pay attention to the challenges of international students, and improve conditions for them, we improve conditions for all students.

Culture Contact Literature

International students are a widely-studied group in culture contact literature. The language, norms, laws, and people differ from those in their native land. Lysgaard (1955) calls the period of adjustment “culture shock,” with an individual passing through four stages. In the honeymoon stage, students are often excited about their new surroundings, tending to take on the role of tourists. As classes start, they may enter the anxiety stage where feelings of isolation or being ‘different’ increase. Often this stage is followed by one of depression. Intervention can reduce its severity and help students reach the adaptation stage. Bennett (1986) describes the journey of international students as one that changes from initial ignorance and resentment to one of understanding and empathy, where students gradually move from the periphery to the centre of the new culture. Adler (1975) explains that the “shaking” of personality allows a more integrated and trans-cultural self to be constructed. Anderson (1994) believes adjustment to be a cyclical process of overcoming obstacles and solving problems. Students generally work out a new identity that encompasses both old and new cultures.

Student Adaptation

International students must undergo both psycho-
logical and socio-cultural adaptations. The former is affected by personality, life changes, coping styles, and social support, whereas the latter relates to the ability to “fit in,” and is affected by how well the students understand the new culture and acquire social skills (Ward & Kennedy, 1999). The greatest difficulties are usually experienced early and by those who do not cope well with stress. If language is a barrier, the period of adaptation tends to be extended. Proficiency tests in English give some indication of a student’s language skills, but language testing has limitations. Students assume that their training in English is sufficient but, when they arrive and encounter ‘local’ English, they frequently find that they do not understand or cannot understand. This increases the culture shock effect. They then have to deal with apprehension, embarrassment, and fear in the process of improving their skills (Li, Fox, & Almarza, 2007).

In many cultures, written/oral work does not need to be cited as all information is considered to be collective wisdom, not an individual’s own work (Ryan, 2005). Plagiarism can also be related to language proficiency as some international students may be aware of what plagiarism is, but may not have the literacy skills to read, extract relevant points, and then put them into their own words.

International students also have to adapt to a new classroom culture. Many Caribbean students, who appear to fit in well, have told me that class discussions are used less frequently in their home countries and it takes them awhile to start to feel comfortable in voicing their opinions openly. For others, the struggle is much greater. In Asia, the ‘sage on stage’ model, a teacher-centered approach, is more common than the learner-centered style of teaching frequently used in Canadian universities. Students from these countries may have never been encouraged to express their opinions to the instructor. Instead, they have been taught to focus on passing exams. Some international students describe our approach as intimidating and they find it virtually impossible to challenge ideas that are presented to them in class. We must provide these students with models of the process that we expect them to use. We also have to be patient when we want them to participate in class discussions. In many cultures, modesty is an important virtue and students may feel that they will ‘lose face’ among their peers if they contribute their ideas, and challenge the facts taught.

Class Practices

By the end of my first semester teaching an upper-level environmental seminar course 12 years ago, I realized that the class was divided into two groups – eager participants and non-participants. Not all of the students in the latter group were international students; some were shy, reticent Canadian students. However, all the students in this class are required to report, orally and/or in writing, the significance of current research on a range of environmental topics, to question arguments presented in class, and offer their viewpoints. Therefore, I had to initiate changes that would help all students succeed and improve their communication skills, and in some cases, their linguistic skills as well.

The seminar class is capped at 15 students, and usually, about 25 percent are international visa students. Most have been in the university for two or three years and are accustomed to the classroom culture at Saint Mary’s. However, classroom experiences vary widely, and many instructors do not require active participation in class. I discovered that some international students were still not comfortable speaking English publicly when they had to participate in their first assignment. Others (including some Canadian students) appeared to be very distressed by the experience, and found it impossible to take part without reading directly from their notes. Since my aim was not to embarrass or intimidate students, but to provide them with the opportunity to share their research and experiences, I had to address the challenges that they were facing. By doing so, I believed that I would improve conditions for everyone in the classroom.

On the first day of the semester, I now try to get to know my students and give them the opportunity to get to know each other. I want to find out the range of class expertise, their countries of origin, countries visited, issues of interest, and likes and dislikes. Many international students will not volunteer
this information orally, but are usually happy to write answers to my questions. This strategy helps me identify those who are eager to speak out, those who will only speak when directly asked, and those who remain silent. I explain what is expected and how I see my role in the classroom as a facilitator, rather than as just their teacher.

Throughout the semester, I invite a range of speakers to visit the class from community organizations, political parties, local municipalities, the Natural History Museum, federal or provincial government bodies, consulting companies, and universities. Prior to the speaker’s visit, I devote a class to discussions/debates/oral presentations that are related to the theme of the forthcoming seminar. This provides students with background knowledge and the opportunity to formulate questions for the speaker. International students frequently struggle with this type of format. They know that they are required to participate in class but, due to their previous educational experiences, it can be an agonizing process for them. Oral presentations can also be daunting. To help them become more confident, non-Canadian students are encouraged to present issues related to their country of origin that are associated with the theme. As a result, the rest of the class learns a new perspective and lively discussions often ensue. Students who seldom voice an opinion usually relax when they talk about a topic that is familiar to them, and when they find that others are eager to learn about their culture and how their country addresses particular environmental concerns.

Many students have negative perceptions about the debate format, but collaborative work can foster a greater understanding and a respect for different cultures, breaking down stereotypic views. However, students often prefer to work in their own cultural groups. Studies in Australia found that the majority of students choose groups where individuals feel “comfortable.” Such groups are from similar cultures, think in a similar manner, share similar personalities, and have a similar sense of humour (Mullins, Quintrell, & Hancock, 1995). When I first started to run the seminar class, I encouraged students to pick their own groups, decide on their debate roles, decide who speaks first, who takes the most difficult position to defend, and choose the format of the debate (formal vs. informal). I discovered that this could result in debates that were ‘painful,’ or sometimes too competitive, resembling a boxing match with only the debaters participating and everyone else afraid to say anything. I found it best to ‘break up’ the groups. Dominant students (i.e., outspoken ones) should not be permitted to debate against those more inhibited in speech, and international students needed to be represented on both teams to encourage discussion of global issues.

The first debates of the semester are now treated as ‘trial runs’ and I guide each student through the whole debate process. We choose the topics as a class to make sure that everyone is familiar with the material, and I assign the teams, roles, and speaking order. Students, who are initially very timid about speaking, gradually find themselves becoming more involved in class. I try to assign them a debate role that allows them to prepare most of the material in advance so that they can attempt to predict the arguments of the opposition and prepare responses. This is especially helpful where language proficiency is somewhat weak.

Not all problems relate to international students. Domestic students may not participate in class because they are introverted, disinterested in the material, or unprepared for the day’s lesson. While international students may be silent for the same reasons, one has to be aware of problems related to linguistic proficiency, cultural experiences, or educational background if success is to be attained in this type of classroom format.

How successful have I been in improving performance and engagement in the classroom? Attendance has increased dramatically over the past 12 years (from about 70 percent to more than 90 percent), partially because I evaluate class participation using a rubric that is made available to the students on the first day of class. Students also evaluate each other (anonymously), helping them learn how to critique the work of others, and ultimately their own work. Comments on course evaluations indicate that most students, not just my international or shy ones, feel that they have improved dramatically in their ability to interact with others and research and pres-
ent information in oral or written format. Therefore, by continually addressing the challenges of our international students we help all of our students. Allowing international students the opportunity to share their cultural backgrounds and experiences enriches everyone in the classroom.

Finally, even though my seminar class involves a small number of students, I incorporate many of the same techniques in my large first-year class (65-75 students). This has enhanced my satisfaction as a teacher and the enjoyment and academic achievement of the students. Each year presents new challenges and new opportunities, and learning to deal with them in new ways fuels my enthusiasm for teaching.

References


**Biography**

Roxanne Richardson is an Instructional Development Associate for the Centre of Academic and Instructional Development at Saint Mary’s University in Halifax and she also teaches first-year and senior students in the Environmental Studies Program. Her research interests include environmental education, student success, the first-year experience, and the relationship between human and environmental health.
Section III

Assessment, Evaluation, & Reflection in a World of Learning
Global Views, Personal Perspectives: Connecting to Self as Scholar

Nicola Simmons
University of Waterloo

A global view requires not only a broader perspective, but also greater depth to anchor it firmly. In increasingly changing contexts, are we connected to ourselves in a way that feeds our spirits and nourishes our work? A professional sphere based only on research and practice risks being unbalanced and may jeopardize our well-being as academics. The activities outlined in this paper encourage you to add a third support: integration of self as scholar towards a more balanced perspective.

Balance in Scholarship

This year’s Society for Teaching and Learning in Higher Education conference theme, A World of Learning, was in part about the impact of globalization in higher education – a timely choice, given international issues of credentials, credit transfer, and accountability. At the same time, class sizes and corresponding workload and its pace continue to increase, and technology-supported multi-tasking has become the expected norm. Is the world truly getting smaller, or are we becoming smaller within it?

In a pre-conference workshop, I proposed that a global view of scholarship requires not only greater breadth of vision, but also greater depth, particularly about who we are and how our perspectives help us find fulfillment in our work. A sense of self as scholar is critical to success, particularly as we work to navigate the stress of our often rapidly changing contexts.

‘Evidence-based practice’ – an integration of research and teaching – is likely a familiar phrase. Indeed, one of the strengths of the relatively new field of the Scholarship of Teaching and Learning (SoTL) is that it naturally connects these two foci. In my mind, however, this integration leaves out something of critical importance. Just as I advise faculty planning their courses to consider the three learning domains (cognitive, psychomotor, and affective), I suggest practitioners consider how these three, which could also be thought of as theory, practice, and self, intersect in their own reflective practice. I note that better balance can be achieved with three points – which will always be in the same plane. Palmer (1998) advised academics to consider the spirit of teaching:
Brookfield (1995) proposed teaching authentically. How often, however, do we think about integrating self as scholar into both teaching and research to create a symbiotic triad of scholarship?

The conference workshop grew from a desire to provide opportunities for others to critically analyze their professional roles, their beliefs and values about those roles, and where they might draw strength and reduce stress in those roles. To this end, we engaged in several activities to help uncover assumptions and unexamined perspectives. In the remainder of this paper I will briefly describe some of these activities, including role/identity graphing, 10 roles, supports and detractors, and a variation on Kompf’s (1993) lifemapping. In each case, I have provided space for you to try the activities as you read.

**Role/Identity Pie Graphs**

This exercise asks you to create pie graphs to compare how your work life is now and how you would like it to be. Spend time thinking about what you put in each circle, and what percentage of your time it occupies. How can you reduce areas that occupy much of your time now but that you would like to replace with more meaningful or rewarding activities?

In my own example, I found that even after including 35 hours a week of work, seven hours sleep per night, driving to work, an hour of physical activity a day, eating, making meals, ferrying kids around, I still had 40 hours left over to spend however I want. I could so easily (and perhaps you already do) fill those extra 40 hours with more work, but I know that’s not how I will be my most productive and fulfilled.
Ten Roles

Another activity that may produce surprising insights is to consider one’s existing roles. Begin by listing descriptors of ten roles (which can also be thought of as hats we wear or aspects of our professional personality, e.g., developmentalist, jester, mentor, etc.). Now, cross off three words you can live without. Think about keeping the items essential to who you are, and deleting the others. Done? Now cross off three more. Now two more (it’s ok – you’re not really giving them up – it’s just on paper). Look at what’s left. Does one word describe you better? If so, circle it. Or, is there a new word that would encompass both the remaining words? Think about what this says about who you are – and what ‘roles’ you were able to give up. An integrated sense of who one is in a particular job can help make the work feel less fractured and in turn, more focused.

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Supports and Detractors

Another tool for reflection is to list factors that contribute to a sense of personal and professional wellness and those that detract from that sense.

Now consider the lists you have made on each side of the graphic. In an ideal world, the factors in your life that contribute to your personal and professional wellness would far outweigh those that detract from it. What can you do to increase the positive factors, and where possible, mitigate the negative ones?
Snakes and Ladders: Game of Life

Lifemapping, as described by Kompf (1993), involves listing significant life events along a timeline and rating them as $-10$ to $+10$ for their life impact at the time of the event and their life impact now. Changes in impact ratings can help you understand patterns of personal growth and reflecting on past events and your response to them can help in anticipating future events and life paths. In working with this activity over the years, I have found some people find it too linear. This led me to the idea that a snakes and ladders format could better support the graphing of overlapping events. (I have since found that snakes and ladders originated in India, where it was used to teach ethics and moral values about life.)

Pick a location for where you are now. Draw in your own snakes and ladders for incidents/times that have affected where you are now, as well as for what will have impact in the future. Use snakes as downward paths to represent events/issues/persons that have a negative impact, and ladders as upward paths for events/issues/persons having a positive impact.

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Final Thoughts

Agryis asserts the value of taking time to examine beliefs and values, saying that those who don’t are “like a thermostat that corrects error (the room is too hot or too cold) without questioning (why am I set at 68 degrees?)” (cited in Apps, 1994, p. 91). The challenge this creates is that one is constantly reacting to the changing environment rather than analyzing and guiding the changes. This puts us in a mode of reactivity rather than creativity. Creativity releases and expands our available energy; reactivity leaves us always feeling like we are playing catch up – with no hope of ever quite doing so. As long ago as 1987, Seldin and others wrote about the challenges of stress faced by academics, and there is no reason to think that the stress has abated. Perhaps we’re now simply too busy to talk or write about it – or even to spend time reflecting on our own stress?

We would do well to remember that scholarship has its etymological roots in schola, meaning, “rest, employment of leisure time…originally a ‘pause’” (Skeat, 1993, p. 418). Bruce Chatwin’s (1987) words in The Songlines serve as a poignant reminder of the importance of attending to what does and does not give us strength and fulfilment in our personal and professional roles:

A white explorer in Africa, anxious to press ahead with his journey, paid his porters for a series of forced marches. But they, almost within reach of their destination, set down their bundles and refused to budge. No amount of extra payment would convince them otherwise. They said they had to wait for their souls to catch up. (p. 230)

References


Biography

Nicola Simmons is a Research and Evaluation Consultant at the University of Waterloo, Ontario, where she supports faculty research about teaching and learning and pursues her own research on developing identity as scholars.
Engaging New Faculty in Reflection and Inquiry About Their Teaching

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Similar to faculty development offerings at other North American post-secondary institutions, the University of Alberta has delivered orientations and short programs that primarily focus on teaching techniques. While this type of professional development is an important element of enhancing teaching, the literature stresses the need for learning opportunities that encourage reflection as well as time for practice and experimentation. Building upon programs and services already in existence, and in alignment with the University of Alberta’s new vision, a formally structured teaching program called the new professor Teaching program was developed and piloted with faculty. The purpose of the program was to engage new professors in the understanding of the academic scholarship of teaching and provide a supported environment for innovation in their teaching. A research study was undertaken to understand how this new program engaged newly hired faculty in reflection and stimulated inquiry about their teaching. The findings of the data collected from the participants indicated that the program was a success and of value. All participants remarked that the program was helpful in developing their teaching repertoire and extending their knowledge of how to become effective teachers.

Introduction

Historically [teaching in higher education] has been a part of the [academic’s] professional role that has relied on passive socialization, on tacit knowledge, and on the benignly collegial assumptions of competence.

Ramsden, 2003, p. xi
In today’s academic world, university administrators need to ensure that quality educational experiences are provided to all students enrolled at their institutions. However, the current expectations and demand for faculty members to conduct research and publish findings can contribute to a complex phenomenon for institutions. The pressures of *publish or perish* placed on faculty members (Booth, 2004; DeRond & Miller, 2005) at large research intensive universities and the expectations to provide quality learning experiences can create a unique tension. This can be particularly so when, either institutions or even faculty members regard the conducting of research as more important or prestigious than the teaching of courses (Booth, 2004).

Most new faculty members are expected to undertake teaching responsibilities and when they do so they have a direct impact on the learning experiences of the students enrolled in their classes. Unfortunately, the vast majority of these new faculty members have no formal training in the teaching of adult learners (Hickson & Wilson, 2008). Therefore, it could be argued that institutions need to re-address the imbalance of importance placed on research and teaching and provide greater support for new faculty in order to develop an understanding of how to effectively deliver course content that enhances student learning opportunities.

As enrolment at the University of Alberta continues to grow and the investment costs of developing new faculty remain high, the need for viable programs to assist in the effective delivery of undergraduate courses and support for the development of new faculty seems to be essential.

The engagement of new faculty in the scholarship of teaching is something that all institutions need to be cognizant of and working toward. As Boyer (1990) suggests, such scholarship involves the encouragement of faculty members to constantly reflect upon their current teaching practices, assess ways to help their students learn, and link those reflections with further inquiry.

**Faculty Development and the *new professor Teaching program* (npTp)**

Similar to faculty development offerings at other North American post-secondary institutions, most of the programs and services offered by University Teaching Services (UTS) at the University of Alberta have been delivered as short seminars or workshops that focus on teaching techniques. While this type of professional development is an important element of enhancing teaching, the literature stresses the need for learning opportunities that encourage reflection as well as time for practice and experimentation (Brookfield, 1995; Cranton, 1996; Katz & Henry, 1993). Therefore, it is important to find ways to help faculty members apply the same level of curiosity to their teaching as they have for their research. Just as it is important for students to be active learners, faculty members also need to become active learners in their role as educators (Hickson & Wilson, 2008). There is a clear need to move beyond focusing on teaching techniques if the aim is to achieve a dynamic learning environment that encourages excellence through thoughtful and reflective instructional practice.

In reaction to these issues, a program called the *new professor Teaching program* (npTp) was developed by UTS to encourage new faculty to reflect upon and inquire into their own teaching, understand how this reflection and inquiry could impact the learning environment for their students, and engage in understanding the academic scholarship of teaching. Development of the npTp was evidence-based and considered effective practices that impact student learning in higher education. In particular, the ideas and thoughts of Clayton and Ash (2005), Jarvis (1992), and Schonwetter and Narzarko (2005) were recognized as a foundation to develop the program from. Once finalized, the npTp consisted of a series of seminars that addressed teaching and learning issues. The seminars occurred at regular times during the first year of the faculty member’s appointment. All the seminars were delivered by selected teaching award winning faculty from a variety of faculties across campus. In order to study the effectiveness of the npTp in achieving these goals for the new faculty members, a research proposal was developed and ethical approval obtained. Funding was obtained through the *Teaching and Learning Enhancement Fund* at the University of Alberta to support the collection and analysis of data to understand the per-
ceived effectiveness of the npTp.

The Research Study

The study design allowed the npTp to be offered for two years. In the first year, a total of 12 participants representing the disciplines of engineering, law, medicine, nursing, and science volunteered to part of the program and the research study. In the second year, eight faculty members chose to be part of the program. Again, the participants were from a variety of faculties including arts, education, and nursing.

In the first year of the research study, the npTp consisted of a structured series of seminars that were delivered by invited faculty who presented their research and its implications for the teaching and learning environment. Participants were engaged in discussions around the seminar topics and were encouraged, through group discussions and written assignments, to reflect on their own practice and how they might begin to apply the research to their own teaching practice. Table 1 illustrates the types of reflective assignments provided during the npTp and a description of their content.

Seminar topics were chosen to mirror a teaching framework and support the understanding of teaching as a scholarly activity that follows a carefully considered process. Topics included, for example, Developing a Personal Teaching Philosophy, Instructional Design, Student Learning and Motivation, Integrating Teaching and Research, Understanding Assessment and Evaluation Practices, and the Scholarship of Teaching and Learning. The seminars were delivered in a systematic manner to ensure a coherent understanding of the teaching and learning process. The new faculty members were introduced to the topics through instructional delivery methods that modeled participant engagement with learning materials and were also provided with opportunities to participate in reflective activities.

In the second year of the research study, changes were made to the structure of the npTp based on the feedback provided from the first year’s participants. Specifically, two changes were made. First, although seminars were again delivered by invited faculty, a greater portion of time was provided to the participants to discuss and analyze their own personal practices in relation to the information and ideas being presented at the seminar. This change maximized

Table 1

Examples of Reflective Activities Provided to Participants

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<th>Statement of Teaching Philosophy</th>
<th>Reflections on Teaching &amp; Learning</th>
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<th>Adult Learning Methods</th>
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<td>Participants were asked to write what they valued about teaching, these thoughts were then placed in an envelope and sealed, after six months of the npTp the envelope was returned to the participants and opened. These early program personal thoughts and ideas were revisited and then discussed with other participants.</td>
<td>Participants were required to complete a questionnaire that had them identify: a) the top three responsibilities of a university teacher; and b) the top three responsibilities of a university student. This was followed with a group style discussion of thoughts and ideas.</td>
<td>The Angelo and Cross (1993) Teaching Goals Inventory tool was administered. This was followed with the participants being provided with time for self-reflection before being asked to participate in a group discussion.</td>
<td>The philosophy of adult education inventory from Galbraith’s (1998) work was administered. Time for self-reflection was allowed before participants were asked to compare their thoughts with their statement of teaching philosophy. This was followed with the opportunity for discussion on how thoughts had changed (or not).</td>
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the amount of participant engagement. Second, tasks were no longer expected to be completed in the participant's own time and were incorporated into the seminar time where immediate peer feedback was provided. This change allowed for greater and more immediate feedback to the participants which challenged and encouraged self-reflection.

Methods

This study involved the engagement of participants in reflective activities and the collection of data from questionnaires, interviews, and reflective writing. Descriptions of the types of activities and data collection techniques that were employed are detailed in Tables 1 and 2. Table 1 provides a description of the kind of activities that the participants participated in and completed, while Table 2 indicates the formal data collection techniques. Data was collected from both the first and second year participants of the npTp to determine the overall effect of the program. From this data, it was hoped to understand the lived experience of the new faculty members, their experiences within the npTp, and whether participation in the program was thought to be beneficial.

A mixed methodology was used to understand the perceptions of the participants regarding the effectiveness of the npTp. A Likert-scale questionnaire was developed and administered to participants in order to provide an initial needs analysis, to direct the choice of topic areas to be covered, and the qualitative data collection methods. As Goodard and Foster (2001) suggested the “lived experiences” of neophyte educators cannot be represented nor understood merely through the analysis of Likert-type data. Therefore, in this study, it was decided that, although the collection of quantitative data was important to provide foundational understanding and direction, it has limited value in regards to analysis and interpretation of the perceptions of the participants. Descriptive statistical procedures were used to analyze the quantitative data and provide a base of understanding from which the focus of the qualitative data collection would be developed. It was found that open-ended survey questions and personal interviews could provide the richness of data that would enable the researchers to identify and understand the information that is important in the lives of new faculty. For the identification of qualitative data constructs, themes and patterns were identified to describe and explain the phenomenon being studied (Gall, Gall, & Borg, 2003).

In a similar manner as most qualitative research studies, the co-investigators asked the formative questions that provided the mid-program feedback. Participants were allowed to return these minute papers anonymously. As well, participants were asked to volunteer a copy of the self-reflective exercises (e.g. Teaching Inventory Goals). Following the completion of the first year of the npTp, exit interviews were conducted by one of the co-investigators of the program. In the second year, the same exit questions were conducted by a graduate research assistant who had been trained to assist with the data collection and analysis. Triangulation was used when considering the themes presented within the qualitative data. The two investigators and the graduate research assistant each reviewed the data, identified themes, and met as a group to determine which themes were evident from the data collected with the different interpretive activities.

Although the presence of the co-investigators

| Table 2 |
| Description of Data Collection Techniques |

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<th>Mid-Program Feedback</th>
<th>Exit Interview</th>
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<td>Classroom assessment technique similar to the minute paper that involved self-reflection, this was then followed with a personal interview to probe answers and gain further insight.</td>
<td>Questions asked during this aspect of the program probed the content and the process of the npTp.</td>
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in the data collection and analysis can raise the issue of potential researcher bias, it is common practice for researchers to undertake such an integral role in qualitative style research. However, the presence of the graduate research assistant did allow for a more ‘external’ view to be gained and enabled any potential bias to be somewhat lessened. Nevertheless, this is a feature that needs to be recognized and acknowledged.

Results

The findings of the participant data indicated that they perceived the npTp to be effective in engaging new faculty in reflection of their teaching practice and stimulating inquiry about their teaching. For example, participants identified two classroom activities that were instrumental in stimulating inquiry: asking participants to develop a one page map of their course content and then present that to their colleagues for discussion, and asking participants to de-construct one of their examinations and relate their findings to their course learning outcomes. The discussions were rich, collegial, and stimulated other questions for participants according to the data.

Participants overwhelmingly supported the value of the npTp. All participants remarked that the program was helpful in developing their teaching repertoire and extending their knowledge of student learning, the intricacies of planning for learning, and effective teaching practices. In particular, participants remarked that the opportunities to discuss issues as a group and reflect on personal practice were of great value.

The analysis of the collected data not only identified three main themes that were consistent between the participants but also indicated that the participants concluded that their participation in the new professor teaching program was most beneficial. The three themes were: developing as teachers, having opportunities to discuss issues in a group setting, and reflecting on personal practice.

Developing as teachers...

“For the first time I really feel as if I am learning about HOW to teach. Consequently, I am not standing in front of my class any more and wondering do the students understand. I know how to find out now!”

“Well, I am a better teacher now. What I mean is, well, I think that I must have been pretty weak before. I really believe that I teach better now. Am I ever glad that I volunteered to part of this project. Thanks!”

“A really, really worthwhile experience. I have become a better teacher by being part of this program.”

Having opportunities to discuss issues in a group setting...

“Just knowing that there were other professors having the same thoughts as me was very comforting. At first it was difficult to say what I was thinking about my teaching but after a while it became a lot easier. When I heard the other members of the group discuss their teaching it made me understand that I could learn from their experiences too.”

“Discussing issues in a group was helpful as I did not feel judged and I think everyone felt comfortable sharing as we all knew each other.”

Reflecting on personal practice...

“I think that this is the first time I have ever really thought about teaching. I suppose I never really considered it to be technical or like an art or science, as they say, I suppose I just thought that you just get up in front of everyone and do it. Now I know differently! I think that this is pretty much the first time that I have taken the time to really think about how you teach.”
“I like to reflect on what I do. The npTp allowed me to do this even more. My reflections over the past year have helped me to improve what I do as a teacher and have made my classes better for students.”

Concluding Thoughts

The data collected from the participants indicated that their involvement in the npTp caused them to reflect upon their practice and stimulated further inquiry about their teaching. From the themes identified, it was clear that the participants welcomed their role in the npTp and thought that the program contributed to their development as a new faculty member. Specifically, they had developed an awareness of how to reflect on and inquire into their own teaching; how reflection and inquiry impacts the learning environment, and how to engage in the academic scholarship of teaching. Post-secondary institutions do invest in their new faculty. Thomas (1997) suggests that by the time tenure is either awarded or denied to a faculty member that institutions have invested between $500,000 and $1,000,000. Therefore, programs such as the npTp may well be of great value. Also, as new faculty members are expected to undertake teaching responsibilities, such a program can help to ensure that new faculty are provided with support in order to have a positive impact on the learning experiences of the students enrolled in their classes. Supporting new faculty members in the scholarship of teaching is a critical issue. By definition, that scholarship involves reflection on practice, and by providing a safe and collegial environment for faculty to reflect and grow, institutions can ensure that new faculty members receive the support and are provided with the opportunities to develop their knowledge and understanding to effectively deliver course material and become to be the educational leaders of tomorrow!

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**Biographies**

Clive Hickson is an Associate Professor at the University of Alberta, where he is a member of the Faculty of Education. Clive has been recognized by both the Faculty of Education and the University of Alberta for his teaching and acts as a Faculty of Education representative on a variety of Alberta Education committees.

Margaret Wilson joined the Centre for Innovation and Development at NorQuest College in January 2008 to develop and implement a new vision for faculty development. For the past five years, Margaret has been the Alberta representative on the STLHE Board of Directors with responsibility for Conference and Events portfolio. She is currently chair of the Alberta Network of Professional and Organizational Development and secretary for the new STLHE College Special Interest Group.
Student evaluation of courses and teaching is a contentious issue in higher education. Recent ly, Côté and Allahar (2007) went as far as to assert that professorial fear of student evaluations is a major contributing factor to rampant grade inflation across North America. Controversy centres on the perceived validity of student course/teaching evaluations: are students capable of providing accurate assessments of teaching ability and course content? The answer to this question has practical implications. For faculty, student evaluations can influence promotion and tenure decisions. For students, evaluations may influence course selection and are often the only opportunity they have to provide feedback on the quality of instruction. Furthermore, these evaluations may be growing in importance in a public policy context increasingly concerned with the ‘quality’ of higher education.

This paper, based on a session given at the 2008 Society for Teaching and Learning in Higher
The Validity of Student Course Evaluations

Education (STLHE) conference at the University of Windsor, provides an overview of research on student course/teaching evaluation validity, including information about instrument development, interpretation and factors often understood to influence evaluation results. The session presentation, and this paper, are both drawn from a larger research project undertaken on behalf and with the support of the Higher Education Quality Council of Ontario (HEQCO).¹

The Great Debate

Since the assessment of teaching effectiveness is a contentious issue, it is not surprising that research in this area is equally divided. Consequently, we decided that our STLHE session would explore current research on this topic through the oppositional format of a parliamentary debate. We debated the resolution that: student course evaluations are a valid and reliable measure of teaching effectiveness for the purposes of summative evaluation. We invited session participants to consider the arguments and evidence presented, offer their own thoughts and experiences through ‘speeches from the floor,’ and vote for the argument they felt was more compelling through ‘division of the house.’ The modified format of our session may be found in Table 1.

We have reproduced both the Prime Minister/Government’s and Leader of the Opposition’s speeches below. We do not suggest that there is a clear ‘winner’ in this debate (although the result of the vote during our conference session was against the resolution), but do point out that there is significant evidence and

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¹ The complete research paper, *Student Course Evaluations: Research, Models and Trends* (Gravestock & Gregor-Greenleaf 2008), is available through HEQCO at http://www.heqco.ca/SiteCollectionDocuments/Student%20Course%20Evaluations.pdf

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Table 1

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<th>Format of the STLHE Session</th>
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<tr>
<td>Government’s opening speech</td>
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<td>Opposition’s speech</td>
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<td>Speeches from the floor</td>
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<tr>
<td>Opposition’s closing remarks</td>
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<td>Government’s closing remarks</td>
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<td>Division of the House</td>
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compelling argumentation on both sides of this issue.

GOVERNMENT (opening remarks)

Be it resolved that student course evaluations are a valid and reliable measure of teaching effectiveness for the purposes of summative evaluation.

Mr. Speaker, this resolution must stand.

There is general and long-standing agreement in the research that course evaluation instruments can be, and most often are, reliable tools for measuring instructional ability in that they provide consistent and stable measures for specific items (e.g., an instructor's organizational skills or relative workload). This is particularly true when the tool is carefully constructed and psychometrically tested before use (for examples, see Abrami, 2001; Theall & Franklin, 2001; Wachtel, 1998; Goldschmid, 1978; Marsh & Roche, 1997; and McKeachie, 1997).

Since the 1970s, scholars have been seeking to identify characteristics that bias student evaluation ratings – studies have focused on administrative conditions, course, instructor, and student characteristics. However, in 40 years of research, nothing has been identified that significantly impacts ratings. As Greenwald (1997) notes in his review of the research, the majority of publications produced between 1975 and 1995 favoured validity. McKeachie (1997) argues that student course evaluations are the “single most valid source on teaching effectiveness” (p. 1218). Those who found course evaluations to be valid have shown that ratings data can be correlated to other evidence of teaching effectiveness such as evaluations from colleagues or trained faculty development personnel.

Issues such as class time, discipline, instructor rank and experience, student motivation, course level, and instructor enthusiasm do have a small, but measurable impact on evaluation ratings. However, this impact does not reflect bias but rather indicates valid shifts in teaching effectiveness. Moreover, they can be considered when ratings are interpreted.

The research does show that there is a positive correlation between grades and student ratings. Some instructors interpret this to mean that lenient grading practices can produce inflated ratings. However, Wachtel (1998), Marsh and Dunkin (1992), Murray (1987), and others argue that this positive correlation is simply evidence of student learning: students rate faculty more positively when they have had a positive classroom experience.

Anecdotal evidence also suggests that faculty who assign more course work are penalized by students with low ratings. However, a study by Heckert, Latier, Ringwald-Burton, and Drazen (2006) found that higher evaluations were given to courses in which the difficulty level was viewed as appropriate but were also positive when students indicated they had expended more effort than anticipated. Overall, this study concludes that more demanding instructors received higher evaluations and therefore refutes the grading leniency hypothesis, and the notion that faculty could ‘buy’ better evaluations with higher grades.

Several decades of research destroy these and countless other myths and misperceptions regarding the validity of student course evaluations. For example, many call into question the ability of students to accurately evaluate teaching effectiveness, arguing that they are not reliable assessors. Studies dating back to the 1970s consistently demonstrate this to be false and show that students are reliable and effective at evaluating teaching behaviours (e.g., presentation, clarity, organization, and active learning techniques), the amount they have learned, the ease or difficulty of their learning experience in the course, the workload in the course, and the validity and value of the assessment used in the course (Nasser & Fresko, 2002; Theall & Franklin, 2001; Ory & Ryan, 2001; Wachtel, 1998; Wagenaar, 1995). Scriven (1997) argues that students are “in a unique position to rate their own increased knowledge and comprehension as well as changed motivation toward the subject taught. As students, they are also in a good position to judge such matters as whether tests covered all the material of the course” (p. 2).

Another persistent myth suggests that ratings reflect instructor popularity or personality. The now famous “Dr. Fox” study from the 1970s, which concludes that an instructor’s enthusiasm or personality can impact evaluations, is widely refuted and discounted on methodological grounds. Ory (2001) argues that “personality” may actually measure teach-
ing behaviours, such as enthusiasm, that may in fact influence teaching effectiveness.

Mr. Speaker, let me mention one final myth, not supported by the research: the majority of faculty object to the use of student course evaluations. Studies demonstrate that this is not the case; rather, a high percentage of faculty possess positive attitudes toward this tool.

OPPOSITION (opening arguments and rebuttal)

Mr. Speaker, let me clearly state that I concede all of the government’s points. I agree that course evaluation instruments offer reliable data and valid measurements of the questions on the forms.

I do not, however, concede the resolution. Rather, I argue that the government has not presented a sufficient perspective of validity. As the government has proven, evaluation forms can and have been developed that adequately pre-empt the influence of any external, biasing factors. However, this internal validity is meaningless if the forms are improperly constructed or used – if student ratings have insufficient construct and consequential validity. I will argue that current course evaluation practice does not provide these types of validity, and that, consequently, student course evaluations do not provide a valid measure of teaching effectiveness for the purposes of summative evaluation.

Ory and Ryan (2001) note that “to make valid inferences about student ratings of instruction, the rating items must be relevant to and representative of the processes, strategies, and knowledge domain of teaching quality” (p. 32). For course evaluations to be valid measures of teaching effectiveness, not only must the questions reflect those aspects of teaching identified as effective, but the very definition of effective teaching must be identified and agreed upon – but, as Ory and Ryan conclude, no “universal set of characteristics of effective teachers and courses that should be used as a target…appears to exist” (p. 32). Furthermore, educational priorities vary by institution, discipline, and even course. By mandating a generic, prescriptive evaluation instrument, we ensure that evaluations are unresponsive to desired and inevitable variations in teaching styles and goals.

We cannot, therefore, develop an instrument that accurately assesses teaching effectiveness because we cannot yet identify universal, comprehensive, and stable measures of effective teaching.

Even if appropriate measures of teaching effectiveness could be identified – though I have just shown this to be impossible – there remains another insurmountable obstacle to course evaluation validity. This is the obstacle of the appropriate interpretation of course evaluation results by faculty and administrators. Menges (2000) argues that “a great many individuals in the assessment area would assert that no matter how valid and reliable the instrument is, consumers can and do misuse the results from it” (p. 8). According to Menges, this misuse, and consequent compromise to validity, can occur for two primary reasons:

1. Administrators frequently receive too much or too little data to properly read the forms. Individual scores on large numbers of questions present an overload of information; conversely, evaluation data is rarely accompanied by information providing a thorough contextualization of the data, including descriptions of course activities and goals.

2. Once they do receive the forms, users of course evaluation data are unclear about the statistical value of evaluation results, often overestimating the significance of, for example, the difference between a rating of 3.5 and one of 3.7 on a 5-point scale. Administrators interpreting the data can not articulate a meaningful distinction between these two scores, and yet are pleased to report that the instructor with a score of 3.7 is a “better” instructor. These statistical challenges are amplified when such comparisons are made across diverse courses or disciplines.

For these insurmountable obstacles to the validity of course evaluations introduced during the construction of evaluation instruments and the interpretation of evaluation data, Mr. Speaker, I must reiterate my assertion that student course evaluations are not valid indicators of teaching effectiveness.
OPPOSITION (closing arguments)

Mr. Speaker, let me once again reiterate that I agree with the Government that teaching evaluations are quite effective at measuring what they seek to measure. I argue, however, that this is a minor, even meaningless determinant of their validity. Until we can agree on a universal set of effective teaching characteristics, or a universally effective way of organizing and presenting course content, we cannot develop evaluation instruments that can effectively capture the infinite varieties of effective teaching and risk, as McKeachie (1997) states, “penaliz[ing] the teacher who is effective despite less than top scores on one or more of the dimensions” (p. 1218) of teaching measured on evaluations.

At the other end of the evaluation process are the threats to validity introduced in the interpretation of evaluation results by users who overestimate the precision of evaluation data and fail to properly contextualize student ratings according to the particular circumstances, characteristics, and intentions of individual courses and instructors. For these reasons, Mr. Speaker, I must restate my strong belief that student course evaluations are not valid measures of teaching effectiveness for the purposes of summative evaluation.

GOVERNMENT (closing arguments)

Mr. Speaker, my esteemed colleague raises many interesting and relevant issues that institutions should bear in mind when developing course evaluation systems; however, let me recall that the most essential issue here is that of bias. As numerous empirical studies have shown, this can be addressed through instrument design, question selection, administration, implementation, and education about interpretation. As Abrami (2001), Franklin (2001), Theall and Franklin (1989, 2001), Kulik (2001) and others note, and we fully agree, education helps to ensure that when data is used for summative purposes, decisions are fair and equitable.

The issues raised by my colleague do not point to any invalidity in the course evaluation instrument itself but rather to issues affecting the role of teaching in the university more generally and particularly for the evaluation of teaching for summative purposes, including tenure and promotion. Moore and Kuol (2005) argue:

Given that it is an almost universal phenomenon that research activity reaps more individual rewards than those associated with teaching, efforts to measure the teaching related dimensions of [faculty] performance, and to pay attention to those measures in the context of an individual’s professional development helps to create more parity of esteem between the teaching and research components of the academic role. (p. 143)

As such, course evaluations are an essential component to ensure the recognition of teaching in higher education. The quantifiability and comparability of course evaluations makes the imprecise art of evaluating teaching more objective and manageable. As Abrami (2001) argues, there is no other option that provides the same sort of quantifiable and comparable data.

All of this only highlights the need for greater attention to this area and the best way to do this is through the continued use of course evaluations.

Conclusion

During the speeches from the floor, many points were raised both criticizing the use of student course evaluations and supporting evaluations’ proper use in an academic environment. Although seminar participants’ comments were evenly split for and against the debate’s resolution, when participants were given the opportunity to vote, the opposition carried the day by a large majority. It is difficult to explain why there was such a clear winner in this debate. It was apparent that some participants were inherently distrustful of student evaluations of courses and teaching and that even researched evidence could not dissuade them from longheld beliefs in popular myths and misperceptions about course evaluations. It is also possible that others may have been swayed by the argument that more work is needed before any teaching assessment tool
The validity of student course evaluations can be declared ‘valid.’ The varied opinions expressed on this topic during our presentation suggest that the debate over student course evaluations is far from being resolved.

References


issues in the practice of university learning and teaching (pp. 141-148). Dublin: All Ireland Society for Higher Education.


Biographies

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The Sophistry of University Rankings: Implications for Learning and Student Welfare

Stewart Page & Kenneth M. Cramer
University of Windsor
Laura Page
Trent University

We present a data-based perspective concerning the recent Maclean’s magazine rankings of Canadian universities, including cluster and other analyses of the 2007 and 2008 data. Canadian universities empirically resemble and relate to each other in a manner different from their formal classification and final rank ordering in the Maclean’s system. Several pitfalls in ranking procedures, related to invalid and unreliable relationships among indices underlying the final ranks, are outlined, along with relevant findings from previous studies. In their present format, although they have become increasingly publicized and promoted, data based on the Maclean’s system are of limited practical use to students. Perhaps more important, ranking exercises have unintended though potentially serious consequences in terms of the intellectual and personal well-being of students.

Introduction

In November 2007 and December 2008, Maclean’s published its 18th and 19th annual rankings of Canadian universities. Indeed, the ranking of universities has become a popular exercise with which to assess and promote higher education in North America (e.g., Bruneau & Savage, 2001; Cramer & Page, 2007; Page & Cramer, 2002, 2003; Page, Cramer, & Page, 2008; Provan & Abercromby, 2000). The ranking approach is similar to that used by publications such as Consumer Reports, in which goods or services are assigned scores, and then assigned relative rank standings.

In this paper, we summarize our examination of the 2007 and 2008 ranking data, and present implications of ranking exercises for the issue of student welfare.
Ranking Procedures

For this exercise, *Maclean's* classifies universities ($N = 47$) into three types: Medical/Doctoral universities ($N = 15$), which contain medical schools and have large graduate departments; Comprehensive universities ($N = 11$), which have no medical schools but may have graduate programs, and Primarily Undergraduate universities ($N = 21$).

The *Maclean’s* ranking data have always reflected six main measures: Student Body (including indices of student ability); Classes (including indices of class size and percentage of classes taught by tenured faculty); Faculty (indices of faculty members’ academic characteristics; Finance (indices of budget parameters and student services; Library (indices assessing holdings); and Reputation (indices based on alumni support and a reputational survey). Pooled over the six measures, *Maclean’s* has typically used a total of 24 indices for Medical/Doctoral universities, 23 for Comprehensive universities, and 22 for Primarily Undergraduate universities. For 2007 and 2008, however, rankings were reduced to 14, 13, and 13 indices respectively, though were still grouped within the above six measures. Details about each index are available in every *Maclean’s* annual university rankings issue.

*Maclean’s* compiles preliminary data for each index separately, computes a weighted sum of points, then constructs an overall rank, with standings reported separately within each university type. In the 2007 data, McGill ranked highest in the Medical/Doctoral category. For Comprehensive schools, the University of Victoria ranked highest. For Undergraduate schools, Acadia and Mount Allison tied for highest. For 2008, McGill, Simon Fraser, and Mount Allison ranked highest in these categories, respectively.

In previous studies, we have examined the *Maclean’s* ranking parameters and published data, including the extent to which the indices were intercorrelated and related to the overall final rankings assigned. We also have examined the degree to which higher-ranking universities were reliably different from those of lower rank. We have found consistently that the main measures and component indices used by *Maclean’s* are internally inconsistent and not reliably related either to each other or to final ranks.

Observations: 2007 and 2008 Ranking Data

For 2007, using Spearman $\rho$ (rank-based) correlations, we find that many indices are unrelated to final rankings. The proportion of indices significantly related (i.e., at $p < .05$) to final rank, collapsing over the three university types, was .471.

For Medical/Doctoral universities, 8/14 indices (57.12 %) were related significantly to final rank. For Comprehensive universities, 4/13 (30.76 %) were related significantly to final rank. For Undergraduate universities, 7/13 (53.84 %) were related significantly to final rank. For each university type, as in previous studies, many of the $\rho$ correlations were negative, that is, with higher final rankings correlated with lower rankings on certain indices, and vice versa.

Although they are conceptually similar across the three university types, the specific *Maclean’s* indices in 2007 and 2008 empirically correlate weakly with each other, and also elicit different patterns of interrelationships and interpretations, depending on the university category under consideration.

For 2008, using Spearman $\rho$ (rank-based) correlations, we find again that many indices are unrelated to final rankings. The proportion of indices significantly related (i.e., at $p < .05$) to final rank (11 of 14), collapsing over the three university types ($N = 47$) was .712. We note that relative rankings, as well as correlations between rankings and reputation, continue to change dynamically each year. Moreover, due to minor variations annually in the underlying data over time, the top several schools in each category necessarily shift back and forth in terms of final rank standings, relative to each other. For Undergraduate schools, the $\rho$ correlation between the 2006 and 2007 rankings was .655, indicating that most of the 2007 rankings were not predictable directly from those of the previous year. For 2008, this correlation was higher, i.e., .942 ($p < .0001$).

For Medical/Doctoral universities in 2008,
8/14 indices (57.12 %) were related significantly to final rank. For Comprehensive universities, 4/13 (30.76 %) were related significantly to final rank. For Undergraduate universities, 5/13 (38.46 %) were related significantly to final rank. For each university type, as in previous studies, many of the \( \rho \) correlations again were negative, that is, with higher final rankings correlated with lower rankings on several indices.

**Higher Versus Lower-Ranking Universities**

We assessed to what extent lower-ranking universities in 2007 differed from higher-ranking ones, in terms of the various indices in the *Maclean’s* system. The top and bottom subgroups (halves) of the universities, within each type, were therefore compared using the Wilcoxon Rank Sum (Mann-Whitney \( U \)) test. The Wilcoxon test examines the significance of differences in ranked data on a specified index, taken from two independent samples (universities). For all universities pooled together, 12 comparisons of these indices were significant.

For Medical/Doctoral universities, the top and bottom groups (halves) differed significantly, at \( p < .05 \), on 6/14 individual indices (42.85 %). For Comprehensive universities, the top versus bottom halves differed significantly on 3/13 (23.07 %) of these indices. For Undergraduate universities, the top versus bottom halves differed on 3/13 (23.07 %) of the indices. Thus, collapsing over the three university types, the top and bottom halves did not differ significantly in average rank on 28 of the 40 (65 %) individual comparisons. For these comparisons, higher-ranking universities therefore had little or no difference from those of lower rank.

**Cluster Analysis of Universities**

A vertical rank ordering of schools tends to exaggerate the apparent differences in final ranks, encourages over-interpretation of rank differences, and obscures similarities. From a different perspective, we therefore employed a cluster analysis (Landau & Leese, 2001) with which to examine patterns of interrelationship among the universities for the 2007 and 2008 rankings, across the three university types used by *Maclean’s*. Using algorithms outlined by Ward (1963), squared Euclidean distances, as estimates of distance between schools, were calculated for the 47 schools, based on their raw scores for the 14 (13 for Comprehensive; 13 for Undergraduate universities) indices. The overall analysis for the 2007 rankings, including all universities, yielded five primary clusters. Unique clusters of schools were identified, in which the similarity of each member’s corresponding profile was maximized, and intercorrelations among members were high. Schools were thus highly similar within a cluster, but dissimilar to those outside of the cluster.

Generally, members within each cluster showed considerable variation in their final rankings. In several cases, universities also belonged to clusters in a manner inconsistent with their membership in one of the three university categories. Thus, one may distinguish between formal a priori or conceptual similarity of universities within a particular type, as de-
fined by *Maclean’s*, and empirical similarity as defined by quantitative analysis of the ranking indices themselves. In most cases, the pattern of relationships within and between clusters was not clearly reflective of rank differences between higher- and lower-standing universities within the three university types. In effect, schools of different characteristics, programs, types, and rank standings may nevertheless be similar in terms of their scores on a particular set of indices.

For the 2008 data, the overall analysis, including all universities, again yielded five primary clusters. Generally, members within each cluster could be grouped into similar pairs or subclusters, and showed considerable variation in their final rankings and membership with reference to the three *Maclean’s* university categories. In several cases, ‘unlikely’ pairs of schools turned out to be empirically similar. In effect then, schools of different characteristics, programs, missions, types, and rank standings may nevertheless show communality in their pattern of scores on a particular – arguably arbitrary – set of indices.

**Discussion and Conclusions**

Aside from the formal concerns of statistical data and comparisons, there remain other issues relevant to ranking exercises.

First, the ranking indices and specialized academic measures used by *Maclean’s* are generally incongruent with the practical reasons for university attendance and selection typically reported by undergraduates themselves (e.g., Cramer & Page, 2007; Page, Cramer, & Page, 2008).

Second, the annual rankings have not generally reflected currently available studies of student satisfaction, wherein most students have indicated high levels of satisfaction with their own institutions, yet in which the highest ranking institutions, perhaps surprisingly, have often done relatively poorly. It is worth noting that, were a set of university rankings to be based on student satisfaction indices generally, it is likely that few if any significant differences in university-rank ordering would therefore be observed.

Third, an emphasis on rank standings obscures the existence of individual programs and the unique missions of different schools, in the context of their particular location and type of student population.

Fourth, among many possible side-effects of ranking exercises, concerns their unintended effects upon the quality of a university’s academic and intellectual spirit as they are experienced and perceived by students. These effects raise the possibility that the rankings may help to generate yet another form of the educational self-fulfilling prophecy at the post-secondary level (Blum, 1978; Page & Rosenthal, 1990; Rosenthal & Jacobson, 1968), indeed one which will affect some students adversely, and others positively. In very practical terms, students do not want to believe that their schools can be easily and publicly rank-ordered, no more than they believe that people should be ranked with indices defining them as haves or have-nots. Accordingly, the academic performance, general orientation, and perhaps overall world view, of those attending ‘lower’ universities continue to be threatened by exposure and reference to ranking exercises, and the typical interpretations which accompany them. Moreover, sizeable research literature now exists which has identified less effective thinking and less efficient intellectual performance in individuals who feel put down or stigmatized in some way. A recent series of studies has shown, for example, that being a member of a negatively stereotyped racial minority can adversely affect one’s academic performance in situations in which the person believes that his or her intellectual ability is being assessed (Steele, 2004; Steele & Aronson, 1998; Kaplan & Saccuzzo, 2001). The notion that one’s university ranking may be used to calibrate levels of ‘smartness,’ (as in the *Maclean’s* question: “Where are the smart students?”), something like finding one’s proper shoe size thus appears misguided and undoubtedly, we believe, harmful to many students. Such a perspective thus reinforces an educational idiom in which students are encouraged to attribute academic failure or attendance at lower-ranking schools to lack of ability, rather than to other possible explanations pertaining to behaviours under an individual’s control (Dweck & Leggett, 1998). To this point, we note that several current research and
counseling programs are thus encouraging students to adopt more helpful and enlightened orientations to learning. The attribution of failure to lack of ability has been linked to many undesirable educational outcomes, such as decreased task persistence, as well as more apathetic and more passive or ‘helpless’ orientations to learning (e.g., Dweck & Leggett, 1998; Dweck & Molden, 2005).

Portrayals of smartness as a static and directly quantifiable ability are marketed within a culture modeled upon the metaphor of Consumer Reports – winners, losers, a ‘best of all’ school, and so on. Moreover, the rapidly expanding interest and literature on ‘self-handicapping’ (e.g., Urdan & Midgley, 2001), raises the researchable hypothesis for the future that students from lower-ranking schools and universities may engage in relatively higher levels of self-defeating and distracting activities, which in turn may serve effectively as excuses for lower academic performance. Future research must therefore be directed to question whether students from lower-ranking institutions suffer in terms of job-seeking activities and even whether, for example, their academic output is evaluated differently or less positively relative to the same input when shown by non-stigmatized students.

It is perhaps ironic that while Canadian schools have now (as of March, 2009) largely withdrawn their active support in terms of providing evaluative data upon demand to Maclean’s magazine, several have nevertheless drawn upon their rank standings, strategically and selectively, with which to promote and market particular programs within the business of higher education. In view of the perceived inevitability of ranking exercises, and the resulting prospect of publicity, several schools naturally have engaged in lobbying efforts toward inclusion of additional ranking indices perceived as likely to enhance particularly their own relative rank standings.

We do not expect customers to evaluate (or reliably rank) all cars in a used car lot, to choose or agree upon the criteria to be used for such a task, or to possess the knowledge required to attempt meaningful comparisons. We similarly would believe that incoming students, for the most part, are hardly in a credible position with which to evaluate and meaningfully calibrate indices of the type which underlie university ranking exercises. Moreover, such vulnerability is increased even more in the midst of unrelenting political and lobbying activities on the part of university authorities, as well by as the siren call of advertising, employed deliberately and competitively by many schools, with which to attract student-customers. The student, with an individual and unique worm’s eye view, is thus effectively a target, caught in the crossfire between the traditional ideals and presumed value of higher education, and the mundane reality of promotive marketing. In our opinion, and looking to the future, the characteristics of the underlying data, and the unintended but real consequences of annual ranking exercises, should now be of concern to parents, students, and authorities at all educational levels.

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**Biographies**

Stewart Page is a Professor in the Department of Psychology at University of Windsor, Ontario. His primary interests are in social psychology, evaluation of universities, personality theory and assessment, and issues in higher education.

Kenneth M. Cramer is a 3M Teaching Fellow and Professor in the Department of Psychology at the University of Windsor, Ontario. His interests are in educational psychology, the impact of university rankings on university students, and lecture engagement strategies.

Laura Page is Assistant Professor in the Department of Psychology at Trent University, Ontario. Her principal interests are in educational and adolescent psychology, including processes in identity formation and development of adolescents’ beliefs and open-mindedness.
Creating a Chain of Teaching and Learning Support: Documenting the Effects of the Teaching Development Graduate Assistant Program

Kristin A. Force
York University

This essay will demonstrate that the teaching development graduate assistant (TDGA) program at the Centre for the Support of Teaching, York University, creates a chain of teaching support between the TDGA coordinator, TDGAs, teaching assistants, faculty, and undergraduate students within a heavily populated university. The importance of teaching and learning workshops for graduate students with minimal university teaching experience will be demonstrated. The methodology for this project includes documenting personal experiences as the TDGA coordinator and informal interviews with TDGAs, discussing their workshops and other activities.

Introduction

Teaching and learning centres at Canadian universities are continually developing activities and programs to support graduate students embarking upon university teaching. An example of this support lies in teaching assistant (TA) training programs. Over the years, scholars have presented a number of strategies for TA training and development in higher education (Nyquist, 1991; Nyquist & Wulff, 1996). Others have created reference guides for university teaching assistants (Lambert, Lane Tice, & Featherstone, 1996; Lane Tice, Jackson, Lambert, & Englot, 2005; Curzan & Damour, 2006). Recently, Ross and Dunphy (2007) compiled a resource for anyone who works with TAs, consisting of various techniques for workshops or classroom sessions. Different centres have taken various approaches to TA development. For example, the teaching support centre at the University of Western Ontario offers a two-and-a-half day seminar at various times throughout the year for TAs in instructional and practical training (TATP, 2009). Ryerson University’s faculty of arts offers an arts teaching assistant development program consisting of TA and peer
development workshops that leads to a general or advanced certificate (*Arts Teaching*, 2009). These programs are facilitated by experienced graduate students and allow TAs to interact with their peers. The purpose of this essay is to outline the teaching development graduate assistant (TDGA) program at York University, emphasizing the role and importance of TA training programs in Canadian universities.

The TDGA program is a joint project of the Centre for the Support of Teaching (CST) and the faculty of graduate studies (*TDGA Program*, 2009). Its goal is to provide teaching and learning support to TAs. This program is coordinated by the CST, complementing its programming for TA teaching development with discipline-specific programming to support teaching and learning within departments. In the majority of graduate programs, the director assigns two PhD students to the TDGA position who have a minimum of two years of teaching experience at the post-secondary level, along with a faculty liaison who is responsible for assisting TDGAs within the department. The graduate students assigned to this role are responsible for organizing and facilitating teaching development workshops and discussion groups, and providing peer support to new and experienced TAs. They are responsible for completing 135 hours of teaching and learning support to the department (the equivalent of one half a TA-ship). In these hours, the TDGA is responsible for organizing at least five hours of discipline-specific workshops and developing teaching resources for their department with a year-end report of their activities. They also attend a number of meetings over the course of the year, as well as the CST’s annual TA Day. The mandatory five hours of workshops that the TDGAs must facilitate is required as the discipline-specific component of the university teaching practicum or the University Teaching Practicum (UTP) (*TDGA Program*, 2009).

Since I had held a TDGA position in the music department for two years and was extremely interested in the program, the academic director of the CST, Dr. Ros Woodhouse assigned me to the TDGA coordinator position for 2007-8. In this inaugural role, my main objective was to create a greater awareness of the program, and a sense of community among TDGAs. In the past, they would typically run five hours of workshops and attend two meetings with minimal interaction among themselves and little communication with the CST. I realized that this was a major problem within the program. Therefore, with the support of the centre, I attempted to create a TDGA community. As a result, the TDGAs became more involved in and enthusiastic about the program by attending numerous meetings and discussion groups, and communicating through the online TDGA Moodle site. In addition, I met with them on an individual basis to check on their progress and provide additional support. Through these strategies, many TDGAs ran more than five hours of workshops, created teaching and learning resources for their departments, utilized the Moodle site, and overall, became more involved in the program.

I facilitated a number of meetings throughout the year with the support of the CST directors and graduate teaching associates. These featured: a faculty liaison and TDGA luncheon, a welcome and orientation meeting, meetings on getting started, achievements and challenges, identifying the existing and emergent needs of TAs, and writing the year-end report. In the initial meetings, I provided methods of initiating their programs for the year and ideas for workshops. Based on Brooks-Harris and Stock-Ward’s (1999) research on workshop construction, TDGAs were encouraged to: a) understand their TAs; b) develop comprehensive workshops and facilitate them in order to promote active learning (p. 10-11); c) assess the needs and interests of TAs in addition to considering their own experiences; d) survey graduate students in their departments to obtain ideas for workshops; and e) become familiar with the university teaching practicum in order to meet TAs’ needs for completing the requirements.

At first, I provided the TDGAs with activities they should consider including in their plan for the year, and then I outlined a sample work plan, encouraging them to implement a variety of activities. They were also provided with a list of possible alternate activities and events, including organizing a departmental orientation for new TAs, developing a teaching manual or newsletter for their department,
coordinating a mentorship program matching new TAs to senior graduate students, holding a professional development workshop, creating a departmental TA directory, developing a departmental teaching resource library, developing a website for TAs, and instituting departmental TA teaching awards (*TDGA Manual*, 2009). I also focused on the importance of connecting research in their disciplines to teaching (Jenkins, Breen, Lindsay & Brew, 2003; Brew, 2006). For example, the music department has an annual fieldwork equipment workshop, focusing on how to use audio-visual equipment for ethno-musical research as well as for teaching. In addition, the TDGA from the humanities department incorporates research on political refugees and multiculturalism to address issues of diversity and human rights in the workshops and the classroom.

Since York University is a heavily populated institution, and academic life is at times a socially isolating experience (Shaw, 2004), I wanted to connect with the TDGAs and find out how they were doing. I met with a representative from dance, music, humanities, education, chemistry, and biology. I began this session by asking them informally if they were having a good experience in their role as a TDGA. I then asked a series of questions designed to determine whether they were actively involved in the program. From the results, these TDGAs were running workshops on a regular basis and participating in other teaching related activities, including developing newsletters and reviews, conducting informal discussions with TAs, creating TA resources, meeting with TAs on an individual basis, learning Moodle, talking to faculty about the program, attaching TDGA events to other department meetings, and discussing the requirements of the UTP with TAs and faculty. In addition, the biology representative facilitated a departmental TA Day.

In the workshops, TDGAs relayed a number of different teaching strategies. The representative from the dance department focused on fostering creative expression, group interaction, and new improvisation strategies. The music TDGA demonstrated how TAs could integrate listening examples into their tutorials. The TDGA from humanities focused on teaching critical skills and generating discussion, in addition to developing a blog incorporating academic and life experiences to highlight the transferability of skills for academics. The education representative stated that the workshops were most successful if structured around group learning. As a result, they were simple, practical, informal, and based on TAs’ own experiences. The chemistry TDGA focused on techniques for running effective labs and the importance of teaching development in the sciences, while the biology representative felt that the workshops were most effective if open-ended questions were presented. TDGAs employed a wide range of techniques for the workshops and classroom that they felt were most applicable to their disciplines.

In previous years, there was minimal communication between TDGAs. In order to initiate an online community, I encouraged them to post their upcoming workshops on the Moodle site. They could then check for workshops in other departments and attend those that were applicable. Of the 36 workshops posted by April 2008, 27.8% dealt with general teaching and learning practice, 27.8% with professional development, 19.4% classroom engagement, 8.3% technology in the classroom, 5.6% essays and writing, 5.6% marking and grading, 2.8% diversity issues, and 2.8% reflective practice. The above categories reflect TAs’ needs, as TDGAs were required to survey them for workshop ideas before organizing any sessions. The workshops in the general teaching and learning category were organized for TAs who needed advice and guidance in teaching, and included training sessions, foundations and general education workshops, and tips for survival and success in specific disciplines. The professional development workshops focused on making the transition from TA to course director, designing and implementing a teaching philosophy, how to design a course, public speaking and presentations, preparing teaching dossiers, publishing, and searching for academic positions. Since this was one of the largest categories, it is evident that TAs today are seeking advice and information on how to move forward in their fields. Recent scholarship has indicated that academics need more guidance than ever as knowledge is constantly changing in higher education and traditional forms of pedagogy are now challenged (Welch, 2005).
The TDGA workshops provide useful teaching techniques and strategies for TAs specific to their disciplines, but most importantly they provide an opportunity for them to openly discuss their questions and concerns, and receive support from their peers, especially in a large institution. They also discuss how to actively engage undergraduates, as student engagement in the twenty-first century is becoming increasingly important (Harper & Quaye, 2008). The interviewed TDGAs stated that their undergraduate students were engaged and involved in their classes.

In summary, TA training programs should be an integral component of graduate studies. TAs heavily depend on the university, and we should respond to their needs and experiences (Andrews, 1985). The TDGA program at York University allows graduate students to develop organizational and communication skills through the facilitation of workshops and other teaching-related activities that are beneficial for future academic or non-academic positions. They learn how to address specific issues within their departments, and communicate with faculty, TAs, and students. They are given the opportunity to work closely with the faculty through department committees, and become more familiar with the university governance structure. Interested faculty members often discuss their teaching strategies with TAs and offer suggestions. Many TAs become more involved in the CST’s teaching and learning workshop series and register for the university teaching practicum. Overall, the TDGA program creates a chain of teaching and learning support and guidance for graduate students preparing to teach in a university.

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**Biography**

Kristin A. Force is currently a research assistant at the Centre for the Support of Teaching at York University, Toronto, Ontario, where she recently completed her doctoral degree in musicology. Her current research focuses on the scholarship of teaching and learning at Australian universities.
‘Transition from school to work’ courses are an excellent way to help fourth-year university students as they complete their studies and prepare for the world of work. In this paper we present The Bases of Competence (Evers, Rush, & Berdrow, 1998), a model of the advanced skills used by university graduates in the workplace. The model consists of four groupings of skills (base competencies): Managing Self, Communicating, Managing People and Tasks, and Mobilizing Innovation and Change. Each base competency consists of four or five more specific advanced skills (e.g., Mobilizing Innovation and Change consists of ability to conceptualize, creativity, risk-taking, and visioning). The base competencies and the skills within each base serve as the core of the skills that make up the skills portfolios students complete in the transition courses conducted at the University of Guelph and the University of Guelph-Humber. Students reflect on and report behaviours related to each skill based on their education, life, and work experiences. The portfolio also includes a résumé, cover letter, and other elements related to career development and work search. The portfolio comprises fifty percent of the course; the remainder is taken up with a project and presentation aimed at capping the student’s undergraduate experience with eyes to the future and enhancing under-utilized oral communication skills.¹

Introduction

This paper is about a fourth-year university capstone course implemented at the University of Guelph and the University of Guelph-Humber. A capstone course should assist students in the transi-

¹ The research undertaken by Evers, Rush, & Berdrow (1998) has since been reinforced by further research conducted by Evers, Power, & Mitchell (2003) in Preparing for the Future: Identifying Advanced Essential Skills Needs in Canada, again finding that leadership and creativity were skills most in demand in the workplace.
tion to the next stage of their life by ‘capping’ or concluding their undergraduate experience. This can be achieved by including two aspects to course material – synthesis and reflection. Synthesis allows students the opportunity to work on something that encompasses what they have learned throughout their academic career. In our case, students work on a project and integrate theories, methods, and research from their discipline. Depending on the size of the class, students work either in groups or alone. The course at the University of Guelph is capped at 35 students whereas the class at the University of Guelph-Humber has about 70 registrants. The second aspect, reflection, is just as important if not moreso in the student’s transition to the next phase of life and is what we focus on in this paper. Students need an assignment or other reflective exercise in order to realize what learning has taken place and how they have grown intellectually. Reflection also enables students to prepare themselves for the workplace by identifying and matching suitable skills and other qualities ready for the work search and ensuing behaviourally based interviews. This connects the world of learning to the world of work.

Students have freedom of choice with the project undertaken in the course. Many choose to examine their intended profession from a very practical point of view. Investigating the realities of the day-to-day aspects of the job, some interview incumbents for the ‘inside story.’ The only proviso is that the paper be written like a journal article and include review of literature, research, theories, and methods appropriate to the discipline. The most recent iteration of the course at the University of Guelph-Humber instigated an electronic peer review system designed for group feedback, and a chance to amend the article before the final grade is assigned. Using this system, students get the chance to experience the academic publishing peer review process, albeit in a reduced format.

Students then present their findings to the class in the latter part of the course, and as creativity is a skill found to be in demand in the research, we encourage presentations to be as creative as possible. Creativity is also a criterion that is marked for, both in the presentation and the skills portfolio.

Portfolio Format

The majority of the course evaluation is taken up with the skills portfolio. Students use a three-ring binder and section dividers for their work. Contents include:

- a personal mission statement;
- intellectual autobiography;
- a résumé (in different formats);
- cover letters;
- record of job interviews;
- evidence of skill development within the base competencies and skills (discussed with the research after the other elements that make up the portfolio);
- development of specific skills;
- summary of strengths and areas needing development; and
- resources (can be anything the student deems relevant).

Personal mission statement

The personal mission statement is a one sentence or one paragraph statement of what the students intend to do in or with their working career. Some tie the statement to their philosophy of life and intended life’s work. Others take a less esoteric approach. We use a method for ascertaining mission statements set forward in Laurie Beth Jones’s book The Path (1996).

Intellectual autobiography

Students have three to five pages in which to write their intellectual journey thus far. This document serves as a great introduction to the portfolio along with the personal mission statement as well as serving as a good grounding reflection exercise. Students can go back as far as they wish. Some include learning that took place as they began formal education, some in high school, and some tie in informal learning experiences beginning their narrative in their undergraduate years.
Résumé, cover letters, and a record of job interviews

This section contains several different types and formats of résumés and a couple of cover letters (either fictitious or real), plus a list of job interviews. We devote one class to an interview workshop where students have the chance to be on both sides of the interviewing table. Students are able to practise interviewing skills in a non-threatening environment and reflect on performance from both an interviewer and interviewee.

Specific skills

In this section, students document skills that are not covered in the base competencies, for example, skills that are specific to their program of study, proficiency in foreign languages, music, sports, use of computer programs (MS Word, Excel, PowerPoint), etc.

Areas of strengths and areas needing development

This section is a summary of the ‘evidence’ sections. Students highlight their strengths and note plans to develop weaker skills.

Skills

The portfolio uses The Bases of Competence as a framework, based on the “Making the Match” research conducted by Evers, Rush, & Berdrow (1998). Discussed next is the research and skills that were found through the research and make-up the bulk of the skills portfolio. The students write reflections of behaviours that show their skill development in each skill area and include ‘evidence’ of skill development (more about this under “Base competency and skills’ definitions”).

“Making the match” research

In 1986, 20 of the Corporate Higher Education Forum’s corporate members and five of its university members agreed to have their organizations participate in phase two of the “making the match” project. The participants, representing five career stages: 1) early university, 2) pre-graduate, 3) job entry, 4) job change, and 5) stabilized career, were surveyed first in 1987/88, and again in 1988/89 and 1989/90. A total of 1,610 respondents completed all three questionnaires.

A set of 18 skills form the heart of the questionnaires completed by students, graduates, and managers. The students and graduates were asked to assess themselves and managers assessed university graduates working in their departments. The skill inventory was analyzed to determine if any logical groupings within the 18 skills exist. Four distinct combinations emerged which were found to be consistent with the evolving literature on skills and which capture the current bases of competence necessary to work in today’s workplace: 1) Mobilizing Innovation and Change: ability to conceptualize, creativity/innovation/ change, risk-taking, and visioning; 2) Managing People and Tasks: coordinating, decision-making, leadership/influence, managing conflict, and planning/organizing; 3) Communicating: interpersonal, listening, oral and written communication; and 4) Managing Self: learning, personal organization/time management, personal strengths, and problem solving/analytic. Interestingly, technical skills did not group with any of the four base competencies; though clearly important to today’s workplace, it was felt that computing and other technical skill areas should be dealt with as a distinct skill set.

Base competency and skills’ definitions

Definitions of each skill within each base competency are presented in the course (Evers, Rush, & Berdrow, 1998). These are the skills and definitions students work with when writing their reflections. They also gather ‘evidence’ to support their writing and include it in the portfolio. The evidence can be awards, papers, letters of commendation, experiences in volunteer and paid jobs, projects, websites, etc. The evidence is intended to reinforce the written reflection (about one page) where the students discuss their abilities in each skill area.

Mobilizing innovation & change – conceptualizing, as well as setting in motion, ways of initiating and managing change that involve significant departures
from current mode.

- **Ability to conceptualize** – involves the ability to combine relevant information from a number of sources, to integrate information into more general contexts, and to apply information to new or broader contexts.
- **Creativity/innovation/change** – involves the ability to adapt to situations of change, at times it involves the ability to initiate change, and provide ‘novel’ solutions to problems. Also involves the ability to re-conceptualize roles in response to changing demands related to the firm’s success.
- **Risk-taking** – involves taking reasonable job-related risks by recognizing alternative or different ways of meeting objectives, while at the same time recognizing the potential negative outcomes and monitoring the progress toward the set objectives.
- **Visioning** – involves the ability to conceptualize the future of the company and to provide innovative paths for the company to follow.

**Managing people & tasks** – accomplishing the tasks at hand by planning, organizing, coordinating, and controlling both resources and people.

- **Coordinating** – involves being able to coordinate the work of peers and subordinates and encourage positive group relationships.
- **Decision-making** – involves making timely decisions on the basis of a thorough assessment of the short- and long-term effects of decisions, recognizing the political and ethical implications, and being able to identify those who will be affected by the decisions made.
- **Leadership/influence** – involves the ability to give direction and guidance to others and to delegate work tasks to peers and subordinates in a manner which proves to be effective, and motivates others to do their best.
- **Managing conflict** – involves the ability to identify sources of conflict between oneself and others, or among other people, and to take steps to overcome disharmony.
- **Planning & organizing** – involves being able to determine the tasks to be carried out toward meeting objectives (strategic and tactical), perhaps assigning some of the tasks to others, monitoring the progress made against the plan, and revising a plan to include new information.

**Communicating** – interacting effectively with a variety of individuals and groups to facilitate the gathering, integrating, and conveying of information in many forms (e.g., verbal, written).

- **Interpersonal** – involves working well with others (superiors, subordinates, and peers), understanding their needs and being sympathetic with them.
- **Listening** – involves being attentive when others are speaking, and responding effectively to others’ comments during a conversation.
- **Oral communication** – involves the ability to present information verbally to others, either one-on-one or in groups.
- **Written communication** – involves the effective writing of formal reports and business correspondence, as well as informal notes and memos.

**Managing self** – constantly developing practices and internalizing routines for maximizing one’s ability to deal with the uncertainty of an ever-changing environment.

- **Learning** – involves the ability to gain knowledge from everyday experiences and to keep up-to-date on developments in their field.
- **Personal organization/time management** – involves managing several tasks at once, being able to set priorities and to allocate time efficiently in order to meet deadlines.
- **Personal strengths** – comprises a variety of personal traits which assist individuals in dealing
with day-to-day work situations. Some examples include: maintaining a high energy level; motivating oneself to function at optimal level of performance; functioning in stressful situations; maintaining a positive attitude; ability to work independently, and responding appropriately to constructive criticism.

- Problem solving/analytic – consists of identifying, prioritizing and solving problems; individually or in groups. Involves the ability to ask the right questions, sort out the many facets of a problem, and contribute ideas as well as answers regarding the problem.

Research Results

The overall ratings by students, graduates, and managers are between ‘high’ and ‘average’ on a five point scale (very high to very low) for all the skills, and hence, the base competencies. Within this range, there are interesting differences. Communicating and Managing Self are consistently rated higher than Mobilizing Innovation and Change and Managing People and Tasks. New hires (job entry group) consistently give themselves lower Mobilizing Innovation and Change and Managing People and Tasks scores than the other groups and rate themselves higher on the other two bases.

Respondents were also asked which skills they felt would be in greatest demand in the future and which ones must be improved. Visioning, creativity, and risk-taking from within the Mobilizing Innovation and Change base were felt to be in the highest demand in the future (and yet were rated the lowest in terms of competence). Also, leadership and managing conflict from the Managing People and Tasks base were viewed as critical skills for university graduates in corporate employment. When asked which of the 18 skills were most in need of improvement, leadership ranked first.

Skills in demand

These rankings are based on the response to “most important areas needing development.”

Areas students would like to see more emphasis in university:
1. Creativity/ Innovation
2. Oral Communication
3. Managing Conflict
4. Leadership

Areas graduates feel could use some improvement:
1. Leadership
2. Creativity/ Innovation
3. Managing Conflict
4. Time Management

Areas managers feel employees need to develop:
1. Leadership
2. Managing Conflict
3. Visioning
4. Creativity/ Innovation

The core set of skills that emerged were: in Mobilizing Innovation & Change, visioning, creativity and risk-taking; and in Managing People & Tasks, leadership and managing conflict. These skills were found to be rated relatively lower in terms of graduates’ and employees’ competence, felt to be in the greatest need of improvement, and in the greatest demand in the future by managers.

Conclusion

Students taking the ‘transition’ courses at the University of Guelph and The University of Guelph-Humber are able to synthesize and reflect on their academic experience based on a framework, The Bases of Competence, which has been found valuable and viable in the workplace. In addition, students begin the career development process and ready themselves for the world of work and their future careers both by the skills portfolio and with their project.

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**Biographies**

Janet Z-K Wolstenholme is an Educational Developer in Teaching Support Services at the University of Guelph, Ontario, where she earned both her Baccalaureate and Masters degrees. She also holds a diploma in art from the Ontario College of Art and Design and a Career Development Practitioner certificate from Conestoga College. Janet’s scholarly interests are in the area of entrepreneurship, career development, and visual culture.

Fred Evers is the Director of Teaching Support Services, and a Professor in Sociology & Anthropology at the University of Guelph, Ontario. He received his Bachelor of Science in rural sociology at Cornell University and his master’s and doctorate degrees in sociology at Iowa State University. His research interests include workplace skills, organizational change, and leadership.
Feedback on student work is problematic for faculty and students in British higher education. Evaluation feedback takes faculty much time to produce and students are often dissatisfied with its quantity, timing, and clarity. The Sounds Good project has been experimenting with the use of digital audio for feedback, aiming to save faculty time and give students richer learning experiences. Results are generally positive, with students and faculty acknowledging the higher quality of audio feedback. Favorable circumstances for timesaving have been identified and there is reason to believe that more faculty will eventually be able to save time on feedback without loss of quality. Practice recommendations for the use of audio feedback are given. Some issues for further research are identified.

Introduction

Feedback on student work is a problem in UK higher education. On the one hand, students often complain that they get too little too late, and sometimes struggle to read or understand what they do get. On the other hand, faculty may be heard grumbling that they spend ages evaluating assignments, but students are only interested in their grade, so don’t read the feedback. Worse, it’s said, some don’t even bother to collect it! Could technology help? Years ago, Rust (2001) suggested using audiotape:

While reducing the time you spend, this may actually increase rather than reduce the amount of feedback given … Students frequently say that they get far more information from taped comments, including the tone of one’s voice, than they do from written comments, and they also do not have to try to cope with some of our illegible writing. (p. 22)

But the idea didn’t catch on in the UK. Perhaps it was partly because of the clunky technology of the time: audio cassettes. Since then, digital audio has arrived: ‘ripping’ music CDs, Skype, and the ‘Listen Again’ facility on the BBC website are but a few
examples; many students have MP3 players. Digital audio is easy to record, manipulate, and transport. I wondered whether it would be worth trying to use it for feedback.

My first experience (Rotheram, 2007) was very positive and encouraging. The students were new faculty on a postgraduate programme aiming to equip them as teachers in higher education. On the programme, the norm was for evaluators to provide extensive feedback on each assignment – 500 words or so. This used to take me quite a while to write, but I was soon able to save time by recording my comments with the free software package ‘Audacity,’ and sending each student an MP3 file containing their feedback. They loved it, noting its highly personal nature and the way it engaged them more than written comments. Clearly, using digital audio feedback benefited me and the students.

The Sounds Good Project

The opportunity for a larger trial came when the Users and Innovation programme of the UK’s Joint Information Systems Committee (JISC) funded Sounds Good: Quicker, Better Assessment Using Audio Feedback. Running between January and July 2008, this pilot project involved 17 faculty members at Leeds Metropolitan University (Leeds Met), who were teaching various subjects at different educational levels. They used digital audio (video, in one instance) to record formative and summative feedback on students’ coursework, mainly in MP3 format. The feedback was delivered through several channels, including email and a virtual learning environment. Student numbers on the various modules ranged from six to 151. At least 463 students received one or more items of audio or video feedback.

We can’t rely heavily on the results. The team were probably atypical higher education teachers: volunteers, with most having been recognised by the University for their abilities in, and commitment to, learning and teaching. Also, their project activities differed considerably. In truth, Sounds Good generated 16 case studies, some very small, about the use of digital audio or video.

That said, what learning points have emerged? The project plan contained five main evaluation questions to be explored.

1. (Without reducing the amount of feedback) in what circumstances can using digital audio save evaluators’ time?

Only a small minority of faculty said that using digital audio saved them time; the largest group thought it took about the same time; the rest felt digital audio or video feedback took more time than their usual methods.

This might be regarded as disappointing. However, most team members expressed satisfaction and noted that students received more, higher-quality, feedback than they otherwise would have done. Some acknowledged that they became quicker as they grew familiar with the technology. Those who found audio feedback took them more time, or about the same time, only used it with a small number of students. So, arguably, they had not achieved full familiarity by the end of their involvement.

An evaluator seems most likely to save time by using audio when s/he: gives a substantial amount of feedback; is comfortable with the technology; writes slowly but records speech quickly.

But let’s not rush to judgement. Two team members suggested it may be worth looking beyond the simple, short-term, matter of whether using audio feedback can save faculty time. One noted that he and his colleagues saved time overall by using audio to give extra advice to students on a piece of work as well as to provide feedback. The audio guidance reduced the need to clarify in other ways what was required with an assignment. Another, highly-experienced member of the team took the view that:

Giving students richer feedback will save you time anyway, as they take more notice of the feedback, and need less repeated feedback, and need less critical feedback in future anyway as their work is better, so it saves you time.
2. Does digital audio feedback improve students’ learning experience?

Students were overwhelmingly positive about receiving audio feedback on their coursework. They approved of its personal nature and detail – evidence that the teacher had carefully considered their work. Some appreciated the advantage of replaying the recording. Others noted that audio made it easier to grasp what the teacher felt was most important, or that it helped them to better understand why they had received a particular mark. Students whose first language is not English were pleased that it gave additional practice with their listening skills. A student with dyslexia said it was easier to listen than to read. On the other hand, some students had reservations. A minority said they preferred written feedback; a few asked for audio and written comments on their work. Why? Some noted that it was quicker to skim-read a piece of text than to listen to an audio recording to find the passage of particular interest. But how seriously should we take this reservation? Many teachers complain that students pay little attention to written feedback. Perhaps it is an advantage that students find it harder to skim audio feedback!

3. What do evaluators think of digital audio as a medium for providing feedback to students?

The Sounds Good team was, on balance, strongly in favour of audio feedback. Some noted it was more likely than written comments to include examples or show how the work might be improved. A language tutor said, “it’s an interesting and personal way to do the feedback for language students.” Some remarked positively that they used more natural language when speaking, rather than writing, their feedback. This, one teacher thought, made it more understandable to students, particularly when it contained ‘feedforward’ implications for future assignments. One team member noted that students found her voice and tone reassuring and comforting. Another, citing widening participation initiatives, reported that audio feedback “is an ideal medium to assist in the development of skills and confidence.”

In only one instance, a teacher discontinued use of audio feedback, and she had good reason. This evaluator thought it appropriate for a particular student assignment only to give brief feedback, and she was, in any case, a quick typist and writer. So, providing feedback via audio introduced an additional time ‘overhead’ for each of the 80 students in the course. This case illustrates what may be the least promising circumstances for using audio feedback.

4. What recommendations are there for improved practice?

The Sounds Good report (Rotheram, 2008) contains more detailed recommendations than space permits here. Briefly, experience suggests that evaluators should not expect to save time immediately by giving audio rather than written feedback. As with most new skills, it takes a while to become competent, longer to become expert. Some persistence will be required. It may feel fairly comfortable after 10-20 attempts.

How much time instructors eventually save will depend on factors such as how much feedback they give and how quickly they write. After some practice, audio may allow noticeably more feedback to be given without spending much longer on the task.

A handheld audio recorder will probably be more convenient than using a microphone connected to a computer. A handheld recorder should: a) be able to record directly to MP3 (many can’t); and b) have a USB port, for easy upload to a computer. It is advisable to aim for the minimum acceptable sound quality for the particular purpose. About four minutes per megabyte (32kbps MP3) will probably be good enough for individual feedback. It is also important to ensure key administrative and quality-assurance personnel accept that audio, rather than written, feedback is being given.

It is usually better to keep the files short – not to ‘overdo it.’ Often two or three minutes will be enough; there should be good reason to go beyond five minutes. One such reason might be that the assignment has failed and the student would benefit from further guidance before resubmission. Another might be that students are postgraduates who expect detailed feedback on drafts.

Keeping this in mind, below is an outline...
of my most recent practice when commenting on a
typical essay or report using an MP3 recording.
I have the assignment details and assessment
criteria with me. I read the assignment, making writ-
ten comments. If it’s on paper, I jot things in the margin. If it’s in an electronic format (e.g. Word), I
use the ‘Track Changes’ feature to annotate the docu-
ment. I then re-read the assignment, more quickly
this time, perhaps making a few more comments
along the way. I jot down (on scrap paper) the main
summary points I wish to make.

When ready, I start the MP3 recorder. I in-
troduce myself to the student in a friendly manner,
name the assignment I’m commenting on, and out-
line the main elements of the comments, which I’ll be
giving. I work steadily through the assignment,
amplifying and explaining notes I’ve written in the
margins and, especially at the end, making more gen-
eral points, all while referring to the evaluation crite-
rion. I explain my thought processes as I move towards
allocating a grade. I then give the grade, offer a few
(reasonably attainable) suggestions for improvement,
even if the work is excellent, and invite comments
from the student.

I build the feedback in chunks, making fre-
quent use of the pause button. I don’t bother to erase
and re-record ‘misspeaks;’ instead, I just correct them
immediately, as in conversation. When complete, I
review the recording to be sure I appear approachable
and not pompous or overbearing.

5. What should be explored next?
JISC has funded Sounds Good 2, to run between
September 2008 and March 2009. The Sounds Good
team will continue to use audio feedback. In addi-
tion, the project design calls for six of the members
to induct two Leeds Met colleagues into using audio
for feedback. The techniques will also be introduced
to three additional higher education institutions.

Funding is limited but, if resources permit,
the project will try to explore the following ques-
tions: can faculty become quicker in providing audio
feedback if they persist? Does using audio to provide
more extensive guidance and richer feedback lead
to saving faculty time in the medium-to-long term?
How may the practice guidelines be improved? Can
instructors automate the transmission of feedback
files to students? Will the novelty of audio – for stu-
dents and faculty – wear off with repeated use?

Conclusion
The Sounds Good project has shown that many stu-
dents prefer digital audio, rather than written feed-
back. Nearly all of the instructors using audio feed-
back prefer it too, because it enables them to serve
learners better. Most evaluators aren’t yet saving time,
but perhaps this will come with experience.

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Biography

Bob Rotheram is Project Manager of Sounds Good
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Assessment, Learning and Teaching.
Real Problems, Real Research, Real Students: Authentic Research with Undergraduates as a Win-Win-Win Collaboration

Carl-Georg (Charly) Bank
University of Toronto

Anne Marie Ryan
Dalhousie University

Authentic research, in which students pose original questions and attempt to find the unknown answers, addresses principles of undergraduate education in an ideal way. With careful planning and reasoned considerations it will benefit students, faculty, and institutions.

Introduction

“Undergraduate research is defined broadly to include scientific inquiry, creative activity, and scholarship….The key is that the project produces some original work” (Kinkead, 2003). It is generally accepted that engaging students in undergraduate research provides them with an enriched and positive learning experience (Boyer, 1998; Laursen et al., 2006). In field- and laboratory-based activities – traditionally an important component of undergraduate education, especially in the sciences (Holt, Abramhoff, Wilcox, & Abell, 1969) – students are often asked to re-create data and tackle questions with a predetermined solution. In contrast, undergraduate research is based on original questions with open answers. Such authentic research requires that all involved have some say in the direction of the research and develop self-efficacy through shared communication (Desai et al., 2008). Authentic research experiences on a variety of scales and over varying lengths of time thus provide avenues for students to create new knowledge and understanding, even at the early stages in their university careers. In such inquiry-based activities students learn by doing research (see Jenkins, Healey, & Zeiter, 2007). In the following, we summarize benefits, discuss considerations, and examine a number of models from our own work.
Benefits of Undergraduate Research

Engaging undergraduate students in authentic research benefits students, their faculty supervisors, and their institutions. Many students can excel in the excitement of research. Research enables them to develop critical and divergent thinking skills and obtain a sense of ownership of the learning process. Their varied backgrounds and interests to discipline-specific research transcend cultures, and by sharing in the progression towards the mastery of a subject, they build a sense of community and understanding with fellow students and faculty. Faculty can discover the fun in teaching as they share ideas about topics of particular interest to them. Indeed, engaging in undergraduate research allows faculty to interconnect their teaching and research in novel ways (Sabatini, 1997). Many institutions, especially large research universities, build their reputation on research. By investing early in undergraduate research they can become stronger because of better student retention and improved student engagement (Kinkead, 2003). Overall, undergraduate research can address and encompass Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987), as outlined in Table 1.

Undergraduate research has therefore the potential to address the principles; although, a faculty member willing to offer such experience to his or her students needs to think about each principle to make the experience most effective. With appropriate planning and consideration, undergraduate research becomes an ideal venue for teaching undergraduates.

Considerations

Engaging undergraduate students in research requires planning and thought. This section features possible pitfalls, anxieties, or obstacles the different parties in the learning process may face, and suggests possible solutions.

<table>
<thead>
<tr>
<th>Principle for good practice</th>
<th>Role of undergraduate research in facilitating good practice</th>
</tr>
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<tbody>
<tr>
<td>Encourages contact between students and faculty</td>
<td>Students interact frequently with faculty individually, or in small group settings.</td>
</tr>
<tr>
<td>Develops reciprocity and cooperation among students</td>
<td>The research requires collaboration with peers, from sharing equipment and/or data, to exchanging ideas.</td>
</tr>
<tr>
<td>Uses active learning techniques</td>
<td>Authentic research, by definition, engages students in active learning.</td>
</tr>
<tr>
<td>Gives prompt feedback</td>
<td>Prompt feedback is intrinsic to the research experience (each step in the research process informs the next step), in addition to ongoing feedback from peers and faculty.</td>
</tr>
<tr>
<td>Emphasizes time on task</td>
<td>Research is time-limited (constrained by course) and goal-oriented, and demands good time management.</td>
</tr>
<tr>
<td>Communicates high expectations</td>
<td>Research requires a high level of commitment to succeed: faculty set this expectation from the start.</td>
</tr>
<tr>
<td>Respects diverse talents and ways of learning</td>
<td>Collaborative research involves drawing on the diverse talents of individuals, and succeeds best when mutual respect is the expected norm.</td>
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</table>
The student perspective

Authentic research is quite distinct from our students’ usual university experience. As teachers, we typically train them to provide the predetermined answer to a question we pose, but research requires us to ask questions for which no one knows the answer (e.g., Schwartz, 2008). This can be frustrating to students. In addition, students wishing to experience research first-hand may not feel adequately prepared, and often lack the necessary background, although they may not be aware of this. Having never done research, they cannot acknowledge nor do not expect that the research process be messy and unpredictable, and that often, much time must be devoted to marginal problems (e.g., equipment malfunction). Students must have realistic time commitments, be motivated to enter a research obligation, and know where to find resources and who to solicit for help. Sometimes they may find themselves with other students who have different objectives and they may struggle to work through these differences. Even when they get through all these pitfalls, they may become frustrated if their results end up in a drawer without being shared.

The undergraduate research experience will be enhanced if faculty members and their institutions consider integrating skills (writing, information literacy, numeracy) into the curriculum and introduce or amend early courses to incorporate inquiry and research methodology. In other words, consideration of the development of the student as a novice researcher must be addressed in the planning. It may be advisable to ask for prerequisite courses and/or a minimum entrance grade, although Kinkead (2003) discusses the benefits for all students. Student involvement in a research project should be transparent, and there should be a “reward” system in place: either they are hired as student assistants with pay, or they earn credit towards their degree. Supervisors should debrief them about the process, and mentor them throughout the duration of their involvement (Kinkead, 2003). Faculty should also encourage and support their students to communicate and receive feedback on their work, for example via a presentation in a departmental seminar. Some universities hold poster days or symposia dedicated to research within the university community, and faculty should also consider regional or local conferences that encourage undergraduate research contributions, either within their own disciplines or across faculty interests. There are also peer-reviewed publications dedicated to undergraduate research findings (Council on Undergraduate Research, 2008).

The faculty perspective

Supervising undergraduate student research requires time, resources, and interpersonal skills. Preparation of a project involves work and commitment, yet results may be less reliable, the number of places for students is limited, and student attitudes are unpredictable. Research is expensive if it needs equipment, consumables, and travel. Initial stages of a project require time, especially if permissions and an ethics review are required. The possibility that the effort may not lead to a publication will make research faculty, especially if they are untenured, hesitant to add such responsibility to their workload; the lack of resources and recognition may dampen the enthusiasm of teaching faculty.

Faculty need to set up a suitable – realistic but demanding – project and may rely on their research group comprised of advanced undergraduate and possibly graduate students for ongoing support of their novice learners. Issues of responsibility must be communicated at the start for all involved. To facilitate the training about techniques and procedures, novice learners can be paired with advanced students. Trial runs may be useful for faculty and students to decide if students are suited, interested, and capable for this research. To ensure accountability, studies can be run more than once. Faculty members should showcase the results of undergraduate research by encouraging oral and poster presentations. Professors should tap funding sources from their institution and community, and could include support for undergraduate involvement into their research proposals. In the United States, projects targeted as Research Experience for Undergraduates can apply for federal support (National Science Foundation, 2008); unfortunately, federal agencies in Canada do not share a similar mandate. Most importantly, faculty must see such efforts as a legitimate and necessary goal of their work, rather
than a burden or distraction from their research; indeed, integrating teaching and research may serve to greatly enhance the research in the long term.

Institutional perspective

Institutions stand to gain a lot in terms of student retention and prestige, yet may be hesitant to support undergraduate research due to lack of resources both financially and administratively, and because of concerns about funneling scarce funds into small groups of students. Equity issues may also play a role; in particular, which students can benefit, and which disciplines shall participate?

Funding is a key element for successful research, and institutions can help attract funding by publicizing research results from their undergraduates and explaining the benefits to potential donors and granting agencies. Institutions may encourage research grants to include an undergraduate component. They can provide administrative support to departments and faculty by setting up a mentorship program. They should take measures to cover risks, especially those involved with fieldwork. Institutions need to reward faculty offering undergraduate research, for example, by counting such work as part of their workload. Institutions should also discuss a shift of expectations: the goal of undergraduate research is not only to produce research, but also to educate and develop future researchers.

Examples of Undergraduate Research Projects

Undergraduate research can take many forms, and may require very different time scales to complete. Whereas the following models draw mostly from our backgrounds in science, the possibilities of applying them in other disciplines abound, and they do not serve as prescriptions for possible activities.

Research activity within a course

Many science classes offer a lab component to improve the understanding of concepts learned in lectures. For example, students in an introductory geophysics course are asked to model data on a computer. In this particular course, students were required during a two-hour exercise to measure gravity over an area on campus known to have underground labs. Just after this lab, one student noted:

The best part about the gravity lab is that it is more creative than most of the other labs we do in school, where we just follow a recipe on a sheet. Beyond learning how to use new equipment, the lab lets us learn to deal with a real situation, where there is no pre-determined way to go about things. I think that being given the opportunity to think about how to run a survey ourselves is the most valuable part of the course, since those skills are transferable to other situations.

Later, students analyzed their data and wrote a short report. Thus, the experience became an integrated exercise, which provided students with the opportunity to learn first-hand about the effort that goes into setting up the experiment, obtaining a useful dataset, and presenting their results in a meaningful way. The data set these students have acquired can plant the seed for a more in-depth study of gravity anomalies on campus.

Another example of course work includes both individual and group research components. A pre-existing, unprocessed data set from approximately 30 lakes in a growing urban-suburban-rural region collected over the past three decades provided a longitudinal study of changes in lake chemistry. Small groups of a second-year geochemistry class were given sub-sets of these data with the main intent of developing their skills in working with geochemical data, graphing, and basic interpretation. However, as work on the assignment progressed, other objectives unfolded. Students determined trends within the data, and attempted to account for these based on where the lakes were situated. Another objective (that students will pursue in the future) is to combine these different sub-data sets into a map base, and establish overall trends and contamination ‘hot spots’ in relation to urban, forest, mining, and agricultural devel-
opment through the 30-year window. Together these objectives would allow the students to gain skill in processing databases, develop an understanding of the need for scientists to communicate and share results, and further develop teamwork and responsibility to the research process. Integrating principles of research using real, raw data in a class-wide activity provides a logical starting point for undergraduate research. Indeed, data from Statistics Canada could be similarly addressed in the humanities and business fields, as students collectively ‘create new knowledge.’

Research-specific course
Institutions and departments may consider offering specific courses which are centered on a research project. Students may generate the research question themselves, and faculty facilitate students’ successful completion of the project, or the course may link to a faculty member’s own research. Both approaches provide students with opportunities to experience the process of doing science.

The first approach was taken in a course on research methods. Students had to come up with their individual projects, develop a testable hypothesis, obtain data, analyze it, and at the end of the course, present posters of their findings to the department. Student evaluations were very positive; one student who was planning on becoming a high-school teacher wrote: “I wish that more courses focused solely on student motivated activities...where the student is empowered to learn, not forced to do activities.”

Specific research courses are offered by some institutions for undergraduates in their second and third years of study. Students can apply to a wide range of projects, faculty supervise them over several months and submit a grade, and the institution provides financial and administrative support (e.g., Faculty of Arts and Science, 2008). In this approach, the student experience is usually embedded into a faculty member’s research interests and may provide a way for teaching faculty to remain active in research.

Honours theses projects
This may be the most common form of authentic undergraduate research. At this stage in their undergraduate program, students can synthesize what they have learned in several years of undergraduate studies. Often the thesis project spans the entire year, starting with data collection in the summer and culminating in a presentation at the end of the academic year. Key to the success of the honours research is mentoring, typically by a faculty member who supervises the thesis, but this also may be undertaken in part by a graduate student or post-doctoral fellow who thus develop their skills at mentoring and communication. Many departments have some sort of formal presentation process. Unfortunately, just few undergraduate students get to present their work at a national or international meeting; those that do usually have a very positive experience. The following quote from a student involved in a one-year, multi-institutional project exemplifies the variety of skills an undergraduate acquires in authentic research:

I learned many things about myself, teamwork and geophysics...First, I improved focus skills needed to see a project through its completion. [Second] I improved my interpersonal skills...[Third] I learned how to absorb a lot of material within a short amount of time...Lastly, I...had to improvise and innovate and create solutions to problems that are not encountered in lab experiments.

Concluding Remarks
Undergraduate research, if considerate of students’ needs, supportive of faculty’s commitment, and placed within the context of an institution’s teaching mandate, has the potential of becoming one of the most beneficial and enriching undergraduate experiences. We have outlined in this article what faculty and institutions need to consider when offering undergraduate research. Any discipline can offer authentic research experiences to their students, although projects will be very different and may not include a field component. We have presented mod-
els from our work in the earth sciences. The Higher Education Academy (2008) showcases examples of how teaching and research can be meshed for other disciplines. When approached thoughtfully, authentic research will create a win-win-win situation because it will benefit undergraduate students, supervising faculty, and institutions.

Acknowledgements

We thank all participants at our STLHE session “Real problems, real research, real students: possible models for authentic undergraduate research, with examples from the natural sciences.” This paper expands on the discussion and insights from that session.

References


Biographies

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Increasing the Impact of Canadian Research on Teaching and Learning in Post-Secondary Education

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York University

Carole Dence
University of Ottawa

This paper builds on an inquiry process initiated during a session at the 2008 Society for Teaching and Learning in Higher Education conference. The goal was to promote scholarly research on teaching, learning, and educational development in Canadian post-secondary institutions by identifying and prioritizing research issues, and emerging collaborative strategies for inquiry into these issues. We reflect on the initial outcomes of the session and on strategies to increase the impact of research on teaching and learning in our institutions.

Introduction

Carole and I are educational developers who share the goal of enhancing students’ learning and academic experience by strengthening learning and teaching environments and practices; and a deep interest in how this agenda can be advanced across Canadian post-secondary institutions. Over time, we have seen a variety of initiatives and approaches emerge and recede both within Canada and internationally – for example, the ‘assessment movement’ (especially in the U.S.A.), ‘Making Teaching Count’ (in Canada), Teaching Quality Audits (in the UK, Australia, Ireland, and Hong Kong), credentialing of faculty development programs and faculty (in the UK), and more recently the Scholarship of Teaching and Learning (SoTL). This American-led movement seeks to improve teaching and learning by promoting faculty and instructor research into teaching and learning within their classrooms.

In the last few years, several Canadian universities and post-secondary institutions have invested in supporting the scholarship of teaching and learning as an educational development strategy. For example, Ryerson University, Kwantlen University College, and Queen’s University are members of the Institu-
tional Leadership program of the Carnegie Academy for the Scholarship of Teaching and Learning. Other Canadian institutions are assisting the scholarship of teaching and learning by other means, such as appointing educational researchers to support faculty in research on teaching and learning. However, not all post-secondary institutions have similar resources, and Canada lacks a national governmental agency or major foundation to enable such support across the post-secondary sector.

Given this context of limited resources, the question we address in this essay is: how can we increase the impact of research on teaching and learning in Canadian post-secondary institutions? Our answer is developed through reflection on the evolution and current state of the scholarship of teaching and learning, and on the research areas prioritized by participants in our conference session.

The History of Faculty Research on Teaching and Learning

Faculty research on teaching and learning has a long history, though it is difficult to trace because it was traditionally disseminated within disciplinary contexts rather than in common and identifiable locations. The literature is not only scattered across disciplines, but is distributed unevenly: research on teaching and learning has had a stronger presence in some disciplines than in others. For example, the literatures on management and medical education are extensive and reflect several decades of research, whereas the literature is more recent and limited to smaller fields which attract less funding and where the outcomes of education have lower stakes for the wider community.

The tradition of faculty research on teaching and learning has been given greater prominence since Hutchings and Shulman (1999) connected it to Boyer’s (1990) proposal for a scholarship of teaching. Boyer proposed that universities had become too narrowly focused on research to the detriment of other academic roles and activities. He suggested defining these other activities – application of academic knowledge, integration of knowledge, and teaching – as domains of scholarship to help them regain value within the academic community. Hutchings and Shulman built on this by reconnecting Boyer’s scholarship of teaching with research, in this case research into learning and teaching. The connection was made in part to “advance the practice and profession of teaching and…bring to teaching the recognition afforded to other forms of scholarly work” (p. 10).

An additional role for faculty research on teaching and learning was emphasized by Patricia Cross. Cross and Steadman (1996) articulated the value of “classroom research” as a strategy by which faculty could increase their understanding of teaching and learning in their own disciplinary and institutional contexts and so become better teachers. Their association between classroom research and ongoing professional development is made clear by their description of the process as “continual and cascading” (p.12), and by their contrast between this programmatic, developmental approach and “one-shot” research studies intended to contribute to pedagogical understanding within the teaching and learning community.

Promotion of the scholarship of teaching and learning has continued and an international infrastructure has developed to support and advance it. Leadership for this movement has come from the Carnegie Foundation Centre for Advanced Study of Teaching and Learning (CASTL) and its programs. Other supporting organizations have been established, including an international society (the International Society for the Scholarship of Teaching and Learning [ISSOTL]), national and international conferences (international conferences include the London SOTL International Conferences, the ISSOTL Conferences, and the International Pedagogical Research Conference), and, more recently, new journals (for example, the International Journal for the Scholarship of Teaching and Learning, and the International Journal of Teaching and Learning in Higher Education). A considerable amount of faculty research on teaching and learning has been disseminated through these venues with a parallel literature on the meaning and assessment of the scholarship of teaching (written primarily by higher education researchers and educational developers). The discourse about this domain of scholarship continues to combine individual developmental
goals with the political goals of improving the status of teaching as an academic activity. In this respect it is noteworthy that in a recent discussion of ten areas of impact for the scholarship of teaching, half reflected individual developmental goals, and the other half addressed the broader political goals of the movement (Ciccone, 2008).

Taken together, these developments indicate a significant level of research activity. However, the significance of this activity cannot be assessed using such a simple indicator. We explore the significance of 'typical' research output in the following section, and then draw out the implications for increasing the impact of research on teaching and learning on faculty, students, and post-secondary education in Canada.

The Current State of Research on Teaching and Learning

The focus on encouraging individual faculty to do research on their teaching has yielded a literature heavily weighted toward 'one-off' evaluation studies of how student learning is affected by an alteration of a teaching strategy within a single course. Faculty choices of interventions and evaluation measures are often motivated by individual interests, and the research findings are inextricably situated within the teaching and learning context where the research was carried out. It is also typical that such research is reported in a localized way, with few connections to similar studies conducted in other disciplinary settings or to how these studies relate to the broader educational literature. Despite the recent emergence of journals publishing research on teaching and learning, the literature remains scattered across the academic journal landscape.

We believe that it is difficult to apply or effectively incorporate much of this literature into one's own teaching. This is partly because it is difficult to infer important details of teaching practices and to learn new teaching skills from research reports. There is also uncertainty and so an element of risk about whether benefits reported in a 'one-off' study will generalize from the specific context where the research was conducted. It is harder still to build a clear overall picture of central research issues and progress from scattered sources and across poorly identified or connected issues. We contend that these difficulties severely limit the potential impact of faculty research on teaching and learning in our institutions.

Proposals for Increasing the Impact of Research on Teaching and Learning in Canada

We indicated earlier that some Canadian institutions are working to build capacity for high quality research on teaching and learning by leveraging institutional networks (for example, the CASTL networks of Institutional Leaders and Affiliates). In addition, these networks focus on themes, the majority of which are related to advancing the scholarship of teaching and learning. This approach may be effective for advancing the 'cause' of research/scholarship on teaching and learning, but it is not clear that this agenda is useful for advancing other teaching and learning issues relevant to post-secondary institutions in Canada. We will therefore focus our proposals on strategies which we believe will support advances across a range of issues.

1. We propose that, as a first step, we need clarity and consensus on the primary goal(s) for promoting research on teaching and learning in Canada.

One possible goal is based on Cross and Steadman's (1996) formulation of classroom research and the scholarship of teaching. This advocates research on teaching as a means to enhance individual faculty members' understanding of teaching and learning within a specific context. In other words, it is primarily a strategy for individual educational development, and only indirectly useful as a strategy to influence wider change (if, for example, participating faculty play an influential role in their institutions). Accordingly, we should limit our expectations for this model to achieve a direct and significant impact on teaching and learning within or beyond our institutions, un-
less significant numbers of faculty become involved.

We note a potential irony in pursuing this approach to educational development. We have not been able to find research demonstrating the ‘continual and cascading’ process of ongoing research and teaching improvement suggested by Cross and Steadman (1996). Conversely, an empirical study of the relationship between research on teaching and teaching effectiveness suggests that highly effective teachers are more likely to conduct this kind of research than are faculty who are less effective teachers (Vajoczki et al., 2008). An implication of this study is that the benefits of improved teaching are limited to those who appear to need them least!

A different reason for promoting faculty research on teaching and learning is to bring about significant change in teaching and learning within and across our institutions. Here too we note a potential irony: evidence about teaching and learning is rarely a sufficient condition to impact attention – much less action – in our institutions. Furthermore, when evidence-based recommendations conflict with preconceptions about teaching or about what can be accomplished within a given teaching context, they are as likely to be dismissed as acted on. For example, faculty who hold conceptions of teaching as the transmission of information may reject evidence that students benefit from interactive strategies in the classroom and argue that such strategies would not be viable in lecture settings. It is likely that changes in education – or any other aspect – of our institutions are more likely to be triggered and sustained by strong internal forces (such as changes in leadership or the need to maintain program accreditation), or external forces (such as the economy and government priorities and policies) than by research evidence.

The limitations of current faculty research on teaching and learning, together with the complexities of organizational change, suggest that simply increasing the intensity or amount of faculty research on teaching and learning is an inadequate strategy for accomplishing significant change in our institutions. However, explicitly encouraging the “continual and cascading” approach recommended by Cross and Steadman (1996) may be worthwhile as an individualized and ongoing, high-level professional development strategy for those faculty who are already effective teachers.

2. We propose a strategic, focused, and collaborative approach to research on teaching and learning.

As we argued earlier, integrating and interpreting a scattered and fractured body of research is a challenging task for those involved in the research and even more so for others who might benefit from it. One way to address the challenge of integrating existing research, and so potentially to increase its impact, would be to encourage review papers that bring together research from all sources by focusing on given topics. Examples of this approach within medical education are the conceptual reviews solicited by the Society of Directors of Research in Medical Education, and the Best Evidence in Medical Education (BEME) series which build on the tradition of systematic reviews developed within the Cochrane and Campbell Collaborations on biomedical and social/educational research, respectively. Coordinating such reviews within, and especially across, disciplines requires an infrastructure to establish review criteria, identify topics, organize groups of reviewers, train them in methodology, and identify a predictable outlet for publication to help others locate these reviews. Establishing such an infrastructure would be a useful step and would help us make more effective use of existing research.

A second strategy for increasing the impact of Canadian research on teaching and learning is to encourage research which extends beyond evaluations of interventions by individuals. In other words, we need to foster research on deeper and wider educational issues relevant to individual faculty and other stakeholders in post-secondary education. We can produce and organize research more effectively by encouraging a focused, collaborative, and strategic research agenda. We also believe that strategic decisions about the research agenda must be made by faculty rather than

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1 We thank an anonymous reviewer for this suggestion.
by agencies or specialist researchers who are removed from daily teaching activities and contexts.

Our first step toward a ‘proof of concept’ for a faculty-driven strategic research agenda was to invite colleagues attending the 2008 Society for Teaching and Learning in Higher Education Conference to collaborate in identifying a set of priority issues for future research on educational development. A small but enthusiastic group of educational developers, an educational researcher, and an interested faculty member participated in a modified nominal group technique, a method devised for planning by achieving a consensus on priorities (Delbecq & Van de Ven, 1971). The procedure was conducted in four phases. We introduced the goals of the session and the process we would be using. Then, participants independently generated salient issues and questions for future research, recording each one on a separate sticky note. As notes were completed, they were gathered and distributed in an unordered manner across a large flat surface. When the generation phase was complete, participants worked collaboratively to cluster the ideas into themes, which were then discussed and labeled by the group and then annotated by a session facilitator.

A detailed account of the results is beyond the scope of this essay. Based on our experience with this method for developing an educational research agenda in other settings, the group was as productive as many larger groups have been. Beyond a simple list of topics, the group identified overarching contextual issues (such as the evolving roles of higher education), and questions reflecting many perspectives on the actual and potential role, practices, and impact of educational development. In our view, the session was highly successful as both proof of concept as an approach for developing a collaborative agenda, and as a pilot for more extensive inquiry into a research agenda for Canadian educational developers.

3. We propose that those involved in doing or using research on teaching and learning must advocate for research support.

It is difficult to accomplish high quality, useful research by simply adding it to routine educational responsibilities. As with research in other areas, it is critical to provide time, materials, and access to a community with shared research interests. As mentioned earlier, research on university-level teaching and learning – other than teacher education – rarely receives support from Canada’s major granting agencies. A few Canadian universities offer grants and/or release time for research. However, the scale of such institutional support is necessarily limited. In particular, we have not been able to find models offering sustained support over time, despite the value of extended time periods for replicating investigations to mitigate some of the design limitations of ‘classroom-based research,’ and for building a stable research community.

The ‘faculty learning community’ model which is widely-used (and often well-resourced) in the US could help to improve these conditions. However, faculty learning communities are typically supported with resources which have been provided ‘up front’ to facilitate the community and its activities. In effect, the advocacy for resources has already been accomplished. Unfortunately, participation and potential benefits are restricted to those in institutions who can afford this model or access external funding (such as Federal Improvement of Post Secondary Education grants), which is not available in Canada.

**Conclusions**

Whether the goal of research on teaching and learning in post-secondary institutions is to improve the recognition of teaching as an academic activity, inform the professional development of individual faculty, or have widespread impact on teaching and learning practices, it is imperative to increase its quality and integration. We can make small advances individually and within our institutions. However, if research on teaching and learning in post-secondary institutions is to have significant impact, we need to be honest about the limitations of what has been accomplished to date, to establish consensus on our research priorities and a vision of what can be accomplished, and to advocate for the resources to realize
this vision. If we cannot advocate for ourselves, it is unlikely that anyone else will do it on our behalf.

References


Biographies

Ros Woodhouse is the Academic Director at the Centre for the Support of Teaching at York University, Toronto, Ontario. Her research interests focus on learning and teaching in Higher Education, with a special focus on knowledge mobilization.

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The Course Challenge Procedure: A Fast but Not Furious Way to Update University Curriculums

Cathie M. Fornssler
University of Saskatchewan

Universities want to encourage faculty to keep curricula up-to-date and innovative, yet faculty dread the prospect of arguing about course and program changes with college and university curriculum committees – which are overworked and overwhelmed with detail. The Course Challenge Procedure (CCP) at the University of Saskatchewan is a collegial yet autonomous way for peer review and approval of new courses, and pre-requisite and program changes. It encourages more faculty members to be informed about curricular changes in other units, yet also allows for faster approval. The CCP can be implemented as a web-based, email, or paper distribution system, and used as the basis for integrated curriculum approval processes at the department, college, and university level.

Introduction

My method to overcome a difficulty is to go around it.
- George Pólya (1887–1985)

Former US President Woodrow Wilson is reputed to have said “it is easier to change the location of a cemetery than to change the school curriculum.” Many faculty would likely agree – in fact, they would rather tackle the cemetery, whose occupants cannot object.

Universities want to encourage faculty to keep curricula up-to-date and innovative, yet faculty dread the prospect of arguing about course and program changes with curriculum committees – which are themselves overworked and overwhelmed with detail. The result is that changes to university curriculums aren’t done frequently enough, can take too long to approve, and may result in unproductive controversy and too much documentation along the way.

At the University of Saskatchewan, many curricular changes are now being approved by the Course Challenge Procedure (CCP). This paper ex-
plains the context of this procedure, how curricular changes are defined, the benefits of the procedure, how it works at the University and elsewhere, and faculty opinions.

The CCP is used for fast approval of new courses, course deletions, pre-requisite changes, and program changes (Fornssler, 2008). It incorporates peer review of these curricular changes, while respecting the authority of colleges and departments in managing their own curriculums. This university procedure encourages more faculty members to be informed about curricular changes in other units, yet also allows for faster approvals.

At the University of Saskatchewan, the CCP is a web-based procedure, but could be implemented at any university as a web-based, email, or paper distribution system. It also has the potential to be used as the basis for integrated curriculum approval processes at the department, college, and university levels.

Context

The University of Saskatchewan implemented the CCP following the changes in the University Act in 1995. Under the academic decision-making structure, which was followed from 1912 to 1995, every curriculum change, no matter how minor, had to be approved by a university committee. When this system was established, however, the university had only 50 faculty; by 1995, with 900 faculty, this course approval system was creating exhaustion and gridlock.

In 1995, the passage of the new University Act provided the impetus to change the way things were done in many places in the institution, and introducing the CCP was one of these changes. An ad-hoc Committee produced a report in 1996, which outlined criteria and principles for this new procedure:

Criteria

1. Increase the level of responsibility and accountability of Colleges for their curricula.
2. Encourage Colleges to keep calendar descriptions accurate with respect to what really happens with the courses they list.
3. Minimize the time delay in securing approvals for curricular changes.
4. Minimize the total effort required in the collegial decision making process.

Principles

1. A University is more than a loose federation of Colleges and Departments. Therefore, there is an onus on Colleges and Departments to consult widely both within and among units. Given the limited resources available, consultation among units must occur to ensure that unnecessary duplication is avoided and that students depending on courses from other units are not disadvantaged.
2. Although courses and programs are developed by individuals, Departments, and Colleges, when approved, they become part of the offerings for which the University of Saskatchewan is publicly accountable and for which the University may be legally held liable if incorrectly advertised.
3. The approval process should be clearly articulated and available to all faculty, departments, and colleges in print and electronic formats. Procedures need to be in place that encourage rather than inhibit departments/units from an ongoing review of courses.
4. Each incremental level of the approval process should have a clearly defined function and should add value to the approval process.
5. The University Calendar is the University’s contract with its students. Therefore, the information contained in the University Calendar related to course and program listings should fully and fairly set out what the University can promise to its students.

Defining Curricular Changes and the CCP

At the outset, it is important to categorize and define the types of curricular changes that universities
must deal with, so that the appropriate level of review can be determined. At the University of Saskatchewan, the definition of a curricular change requiring university approval is any change which affects a student’s academic program or transcript. For example, changing the textbooks for a course does not affect the transcript so such a change would not require university approval – though changing the text may well be something an instructor would discuss extensively with department colleagues. Introducing a new course, deleting a course, or changing the courses required for a degree would affect the transcript, and therefore, would be the type of curricular change that requires University approval. These are the types of curricular changes for which the CCP was implemented.

The term, ‘course challenge,’ can be a confusing one. Other universities will use similar terminology to describe giving a student credit for prior learning, or allow a student to ‘challenge’ a course by writing the exam without having to register in the course. Another common definition of ‘course challenge’ would be to describe the intellectual rigour of a course.

Benefits of the Course Challenge Procedure

For the University of Saskatchewan, the CCP is a curricular approval procedure. It begins with a document posted on a website, which describes all of the new courses and other curricular changes that colleges are proposing. Then for a defined period of time, any member of the university community – faculty, student, or staff – can ‘challenge’ a proposed change. If no challenge is received, then the curricular change proposal is approved. Only if a proposed change is challenged, and only if the challenge cannot be resolved, would the senior curriculum committee have to deal with the proposal.

It is a procedure which respects autonomy and collegiality, both of which are important values of universities. Autonomy is integral to the concept of a university, where individual faculty pursue research interests and create courses, and where college faculties define curricula, set standards, create programs and academic regulations, and prescribe graduation requirements. Collegiality is also integral to how universities function, expressed in the mutual respect that is accorded to all disciplines at a university and in the goal of universities to create a supportive environment that fosters lively debate and a spirit of enquiry.

Collegiality and autonomy can sometimes be in conflict, particularly when faculty members experience the frustration of having to justify their curricular decisions to a senior curriculum committee which does not appreciate the specific situation a department is dealing with. On the other hand, faculty committees identify errors, gaps, and conflicts often enough that universities are reluctant to dispense completely with a mechanism for collegial review of curricular decisions.

The CCP combines both collegiality and autonomy in making decisions about curricular changes. It gives colleges autonomy over their curriculum by dispensing with the usual university requirement that curricular changes be justified to and approved by a senior curriculum committee. But because curriculum changes are circulated so widely, any errors or deficiencies in consultation are identified quickly. In that sense, the CCP could be considered even more collegial than the usual committee approach.

Use at Other Universities

There are not many universities using this procedure for course approvals. In searching websites, there appear to be only two other universities in Canada have implemented a similar procedure – the University of Alberta (University of Alberta, n.d.), from which the University of Saskatchewan procedure was originally modeled); and Thompson Rivers University. In the United States, Illinois State University (Illinois State University, n.d.) and the University of Delaware (University of Delaware, n.d.) appear to have comparable course approval procedures.

There are also some interesting variations – the University of Wollongong in Australia has a procedure that allows Deans to approve courses pro-
visionally when there is a “market-driven” reason (Fornssler, 2008, p. 20). And the University of California Davis had a web-based submission procedure, though the approvals are still done by a committee (Fornssler, 2008). While some universities discuss curricular design strategies and best practices, there is limited discussion about curriculum approval processes (Course and curriculum, n.d.).

How the CCP Works

At the University of Saskatchewan, the CCP is used for minor program changes, new courses, deletions, prerequisites, and changes to service courses which would affect students in other programs or colleges (such as a new lab or other change of that type).

The Procedure works as follows:

- Colleges send their approved curricular changes to the Office of the University Secretary by email.
- The document is reviewed to make sure it is within the challenge policy.
- Deadline dates are set.
- The document is assembled and posted on the website.
- The university community is informed that the document has been posted along with the deadlines for review.

The review period is two weeks, with some flexibility over the Christmas break, and during the summer months. If no challenge is received, the curricular change is considered approved and is implemented.

Handling a Challenge

If a challenge is made, the Office of the University Secretary determines whether it can be resolved informally. Most challenges are resolved in this way, for example, a confusing course title or a request for an alternate prerequisite. Sometimes a curricular change is simply withdrawn or deferred by agreement between departments.

When an informal resolution cannot be achieved, the challenger writes a memo describing grounds for objection and the department and/or college replies. The Vice-President, Academic then reviews the issue and tries to mediate. If the challenge is still not resolved, then the issue is referred to the University’s senior curricular committee for a final decision.

One of the sources of anxiety around introducing a CCP is fear that such a system will produce dozens of frivolous challenges. The experience at the University of Saskatchewan has been the opposite. Challenges are few, perhaps because faculty are now very diligent about consulting widely before finalizing their proposals. However, when a challenge is made, it usually has merit, because it identifies a significant problem with a proposed curricular change.

Since the CCP was implemented in 1997, the University has approved hundreds of curricular initiatives and changes. In that time, there have been fewer than 20 challenges. Of those, only two or three could not be resolved and had to be referred to the senior curriculum committee.

It should be noted that when dealing with new programs or program deletions, the University of Saskatchewan still follows the traditional academic approval route – discussion by curricular committees and approval at faculty council. It would be expected that the number of challenges would increase if the CCP was also used for new programs and program deletions, so that in the end, it is likely that most of these more significant changes would be dealt with by the senior curriculum committee in any case.

Opinions about the Procedure

Surveying University of Saskatchewan faculty and staff about the procedure produced the following comments:

“It is a very good process…it provides colleges with timely responses and is easy to understand.”

“It’s all good. It is a fast, transparent, and
The Course Challenge Procedure

open process.”

“…an excellent process. It balances the rights and interests of colleges with the rights and needs of the broader university community. Colleges need to be able to develop new courses in response to change and the challenge process acknowledges the role of colleges as subject matter experts. The challenge process notifies the university community of potential duplication of academic content and also communicates new course offerings.”

Few suggestions for changes to the procedure have been received. Initially, the CCP was scheduled once a month, primarily due to the staff time involved in duplication and mailing. This caused some difficulty for colleges in terms of the scheduling of their faculty meetings for curricular approvals. When the procedure was changed so that Challenge documents were distributed by email, this allowed greater flexibility in the posting schedule.

Conclusion

After more than a decade of experience with the CCP, the University of Saskatchewan has found it to be an innovative process for fast approval of university curriculum changes, respecting academic autonomy, while also allowing for collegial input and review.

Now that a web-based procedure is being used for the CCP, consideration is being given to developing a web-based data input for curricular changes to allow easier production of various curricular approval documents, and could be linked directly to the updating and production of the University’s course calendar.

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Biography

Cathie M. Fornssler is the Committee Coordinator in the Office of the University Secretary at the University of Saskatchewan, where she has supervised the implementation and use of the Course Challenge Procedure since 1998.
This paper will highlight an innovate practice in teaching and learning by reflecting on two fourth-year sociology seminar classes that participated in a community-based learning project at York University. Fifty students collaborated in three to six person teams to work on a problem/issue identified by one of five not-for-profit organizations who work with and/or for women as victims, offenders, and/or professionals in the Canadian criminal justice system. Reflections on the process and outcome of the experience offer insights into organizing and engaging in a community-based learning experience as well as point to some of the substantive benefits. These include the opportunity for increased student engagement, access to, and awareness of, course and community related issues, and citizenship. The paper also identifies potential opportunities to incorporate the dimensions of participation and collaboration between institutions of higher learning and the community/world to mobilize knowledge and offer unique scholarship opportunities for faculty.

Last year, I integrated a community-based learning component into my sociology course curriculum. I had heard about this initiative from a colleague in my department who was a leader in broadening her pedagogical insights to increase student engagement and result in a richer, more successful teaching and learning environment for her students and herself. Although the language of ‘community-based learning’ was new to me, the idea of and enthusiasm for ‘mobilizing knowledge’ was not. The Social Sciences and Humanities Research Council defines it as “moving knowledge into active service for the broadest possible common good” (Association of Universities and Colleges of Canada, 2008, p. 9).

For twenty years, I worked as an applied sociologist with communities throughout Ontario on social justice issues and engaged in activism and participatory action research. During this time, I organized conferences and events that facilitated dialogue and the sharing of experiences and knowledge between academics and not-for-profit organizations and committees working within their communities on specific practical issues. I have always identified myself as an applied sociologist and although mes-
sages from my discipline about the acceptance and value of applied vs. “pure scholarship” are contradictory, to say the least (Langan & Morton, in press), academics within the applied sociology movement have argued that “for sociology to be ‘workable’ and prosper, it must validate its knowledge and theories through practice in the real world” (Boros, 1997 as cited in Joyner, 2003, p. 5).

When I returned to academia four years ago, I felt even more committed to search for teaching and learning strategies to help my students and I make more explicit connections between theories of crime, social and legal policy, and front line work. During the past four years I have identified a number of benefits which come with integrating community-based learning into our curriculum. These include opportunities to embrace and assist in fulfilling the academic mission of the university and the Ontario Council of Academic Vice Presidents Guidelines for University Undergraduate Degree Level Expectations; student engagement and student-centred learning and evaluation; and scholarship opportunities for faculty. As an example, my personal interest in and commitment to designing learning outcomes which cohere with larger departmental and university curriculum came in part from my work with not-for-profit organizations on organizational planning and their attempts to stay true (vis-à-vis time and activities) to their organizational missions. A review of York University’s mission articulates its objectives and purposes as: the advancement of learning and the dissemination of knowledge; and the intellectual, spiritual, social, moral and physical development of its members and the betterment of society (York University Act, 1965). My interpretation of my universities’ mission fits well with a community-based learning model, which plays an important role in working in partnership with our communities to address community problems. As Lowe and Reisch (1998) predicted,

Urban universities and colleges are continuing to recognize that they are inextricably linked to their surrounding communities. Consequently, community development, community-based research, and community practice will be areas of increasing importance to academic institutions and funding agencies in the decade ahead. (p. 296)

Community-Based Learning

In the 2007-2008 academic year, I incorporated a community-based learning component into two sections of Women and the Criminal Justice System, a fourth-year sociology seminar course, which aims to critically examine theory, research, policy, and emerging issues related to young and adult women. It analyzes their representation and engagement with the criminal justice system as offenders and criminalized women, victims/survivors/witnesses and practitioners/professionals. Topics addressed in the course include sex, gender, and legal regulation, the legal regulation of motherhood, violence against women and sexual violence, fear of crime and victimization, masculinities and crime, gender and policing etc.

A community-based learning initiative felt like a good fit with a course on women and the Canadian criminal justice system, since it would provide students with a unique opportunity to make relevant connections between theories which attempt to explain the reality of victimization and criminalization of women, current research on topical issues, social and criminal policy, and local organizational needs and issues. As Holsinger (2008) points out “linking community agencies with college students in two feminist criminology college courses meets a number of academic and social justice goals” (p. 319).

Since community-based learning was new to me, I found resources like the Canadian Alliance for Community Service Learning (CSL) very useful in helping to articulate what it was I was trying to accomplish. According to the CSL (2008), community-based learning and service-learning are:
develop as individuals, in relation to their values, their sense of social responsibility and their leadership skills.

The National Service-Learning Clearinghouse (2008) defines service-learning as, “a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.” I find this definition to be particularly helpful to articulate the myriad of benefits and opportunities available by integrating this tool.

In order to ensure a good fit between the course expectations, requirements, and community partner needs, I worked with Atkinson Faculty of Liberal and Professional Studies, Experiential Education programme to help find and communicate with potential community partners whose mandates were relevant to the themes of the course. Once a mutual decision (between the organization and myself) was made about which community partners would be involved, they were invited to the classroom to present a problem, question, or area of research they wanted addressed by a small student team from my course.

The participating community partners included Yellow Brick House (a shelter for abused women and their children), the Ontario Women in Law Enforcement, Sex Professionals of Canada, the Elizabeth Fry Society of Toronto and the Ontario Association of Interval and Transition Houses. In January 2008, they made short presentations to the students about their organizations and their project ideas and students chose projects according to their interests. Some of the community partners presented one project idea for student teams to work on, while other community partners presented numerous projects.

Each of the two seminar classes had 25 students, and between the two classes there were 13 different projects available from which small student teams could choose. Examples of the projects available included the need to search for, and review scholarly literature, while other projects required students to find and review programs operating elsewhere in Canada that may be used by the community partner as an alternative program model. Once small student teams chose projects, they worked together in and outside of the classroom to develop a project plan. This plan articulated key project deliverables and a time-management plan, which would help them fulfill the requirements of their project.

At the end of the course, community partners were invited back on the same day to hear short student presentations which summarized the process they used to fulfill their objectives and the product or result of their work. Community partners had an opportunity to reflect on the experience with the students and talk about the way their organization would be using the information provided by the student teams.

Opportunities and Challenges

As I become more familiar with the literature on best practices for evaluating community-based learning, I recognized that I did not include as many opportunities to obtain reflections from students or community partners about their experiences as I wanted. However, at the end of the course, I distributed a post experience questionnaire, which asked students and community partners to reflect on their community-based learning endeavour. This opportunity for reflection elicited feedback from students about outcomes, which I categorized into four main themes: knowledge mobilization; integration of theory, research, policy and service; active and student centered learning and assessment; and opportunities for research and pedagogical scholarship. These four themes identify the benefits I outlined at the outset for using a community-based learning approach. I will briefly expand on a couple of them.

To date, community-based learning is one of the best teaching and learning tools available within institutions of higher learning which actively works toward mobilizing knowledge. This provides academics and communities opportunities to work together to produce and share knowledge to meet real, defined community needs. In our case, a community partner identified the need for young women in their community to be provided more resources and assis-
tance in dealing with what they referred to as “community violence,” hate crimes based on their gender, race, and class. Another community partner shared with us that,

[t]his was an ideal opportunity for our organization, as it met one of our organizational goals for outreach to the community. It provided a two way communication opportunity, learning initiatives for the team participants which includes our organization, and information that can be used and published to enlighten our members.

The opportunity for students to integrate theory, research, policy and service was one of the most exciting outcomes. As an example of the student reflections, one student wrote, “the community-based learning project connected the theories we discussed in class regarding women in the criminal justice system.” Another student suggested,

[c]ommunity-based learning allowed us to work with a specific organization. It was a different experience to feel as though you are contributing to a real live organization and issue. Classroom work doesn’t really allow you to see what your findings do in the context of real life.

For instance, one student team worked on obtaining statistics and information for the Sex Professionals of Canada, which were to be used by them in their Supreme Court of Canada challenge of sections of the criminal code related to offences on communicating for the purposes of prostitution.

Through the projects and relationships, which developed between the community partners and I, there were exciting opportunities for faculty to incorporate research and pedagogical scholarship with community-based initiatives within our courses. Researching and writing about the process and results of community-based learning as a teaching and learning strategy provided an entirely new avenue of scholarship for me. Learning about the Society for Teaching and Learning annual conferences was another new and exciting opportunity to collaborate and learn from other academics interested in university-community partners as a way to enhance teaching and learning in the classroom. In addition, it identified so many more opportunities for faculty to work with their community on mobilizing knowledge and contributing in scholarly ways to the literature.

Despite the many benefits and opportunities available for students, community partners, faculty and the university from community-based learning, there were also many challenges. The three main challenges included: time, the lack of feedback, reflection, evaluation, and issues pertaining to research ethics. My students and I were in agreement that engaging in a community-based learning project can take more time and energy than more traditional curriculum. Part of this was due to the fact that none of us had prior experience. It was also the case that it required students to employ good time management, organizational skills, communication and collaboration as well as teamwork and leadership to be successful in this endeavour.

A final insight from our experience was the recognition that the process required more opportunities, time, and space for reflection and feedback from all parties on what and how we were doing. More communication between the community partners and I was required as a way to help ensure that student processes and activities were in keeping with the organizational expectations. More communication between the student teams and I would have reduced some of the students’ anxieties and roadblocks to completing their projects. Finally, uncertainties about the procedures and requirements for research ethics approval for students and professors involved in community-based learning projects resulted in less opportunity for students to complete the requirements of their projects as fully as they would have liked.

In conclusion, despite our lack of experience and the challenges we faced, it provided the students, the community partners, and I a window into opportunities to facilitate knowledge mobilization, fill recent requirements for curricular learning outcomes, student engagement and student-centred learning and evaluation as well as unique scholarship oppor-
I have just begun a new academic term with new students, new and old community partners, a new and enhanced passion for community-based learning and all the potential benefits and challenges it provides.

References


Biography

Mavis Morton is a Sessional Assistant Professor in the Department of Sociology at York University. She has conducted extensive participatory action research with criminal justice, social service, and violence against women advocates and organizations in rural and urban communities on issues such as violence against women.
Fly on the Wall

Dave Berry & Cynthia Korpan
University of Victoria

This paper describes the implementation of a peer observation program at the University of Victoria called the Lecture Club. The observers are not interactive during the class – they are the proverbial flies on the wall. The paper identifies the program as self-developmental, discussing the attributes of this learning-to-teach and peer-sharing methodology. The paper concludes with ideas for further development of this program.

Introduction

Peer observations have proven to be a powerful tool in helping one to learn new techniques and ideas about teaching (McKeachie, 1999). Its value stems from the fact that it is not expert-based, but relies on the engagement of the observer to translate and apply the demonstrated skills to the teaching environment of the observer. Peer observation, still considered a relatively new practice (Shortland, 2004), has taken many forms since its inception. It began as a management-driven, evaluation model, followed by a more developmental model, which then morphed into the reciprocal/reflective, peer-review model (Gosling, 2002). An example of a peer-review model1 is Teaching Squares, a program that we have used in the past, where instructors agree to observe and be observed by members of a three or four person group (Berry, 2008). This article describes the implementation of an alternative peer observation program called the Lecture Club (Sommer & Sommer, 2006), which is identified here as a self-developmental model.

Cosh (1998) suggests a self-developmental approach, asking for a model that is active, reflective, benefits the observer, and eliminates all judgment. Lortie (as cited in Cosh, 1998) recognizes that the greatest influence of what constitutes good teaching primarily comes from one’s own experiences of being taught, as opposed to training and absorption of theories of education. The argument continues whereby the benefit of collegiality and exposure to different teaching styles in different disciplines

1 See Bell (2005) for a comprehensive guide to the Teaching Squares form of peer observation.
promotes “an intra-personal process, which encourages awareness, experiment, and the sharing and dissemination of good practice” (p. 173). Donnelly (2007) concurs by noting that those who participated in a peer observation exercise at the author’s institution were able to learn how to be more effective teachers by watching the teaching of others. Cosh (1999) states that teachers should initiate their own development of teaching methodologies, and explains two ways that a self-developmental model could be implemented, both of which are very similar to the Lecture Club. Through the Lecture Club, we have been able to engage in a self-developmental model that encourages features highlighted by Cosh (1998, 1999).

We will first describe what comprises the Lecture Club, followed by an elaboration of the self-developmental model, concluding with outcomes, other forms of this model, and future development.

What is the Lecture Club?

The basis of the Lecture Club is to take a group of observers to a series of classes delivered by volunteer instructors, teaching in their regular classroom environment. As Cosh (1999) points out, “we have a highly valuable and free resource in our midst, which requires little administration: other teachers” (p. 25). The observers do not interact within the class. Some time after the class visit, the observers meet to discuss what they saw. Initially, we expected that this relatively passive method of developing one’s teaching would appeal specifically to new instructors, but in fact, we have found seasoned professors, experienced senior instructors, and new instructors indicating interest. The first Lecture Club in the summer of 2007 attracted six graduate students, while the spring 2008 Club had four graduate students and two faculty members. As opposed to a course in teaching, it is a relatively low assignment of time for the busy academic, and yet when taken in a cross-discipline environment offered by a central teaching unit, can broaden the techniques that are commonly used within the observer’s culture.

Although the Lecture Club has been described before (Sommer & Sommer, 2006), we have found several issues that have raised the value of using this as a tool for the educational developer. The role of the facilitator is key to the success of the working group. Naturally, the first role of the facilitator is to advertise. At the same time, a broad selection of volunteer instructors is recruited. Quite deliberately, we have chosen to keep a variety of disciplines represented in both the participants and instructors. The participants are required to agree to a code of confidentiality, keeping specific observations within the classroom or the discussion group. This is usually discussed in the first meeting and then emailed simultaneously to the participants.

The first meeting is also an ideal time to answer questions about the procedure and to offer an outline of the proposed schedule. More importantly, it is an opportunity to have a practice observation. Typically, we show a recorded class in progress for about 10 minutes, and then have a short discussion session. The purpose of this is to remind participants of two important aspects of observing in this context: they must focus entirely on method and not on content since this model is about improving their teaching and the subsequent impact on student learning; and we demonstrate the variety of ways in which observations can be collected under an equally large variety of biases. Cosh (1998) supports this approach to observation, highlighting the necessity for an “open mind and questioning attitude, and to provide an environment in which we can reassess our own teaching in the light of the teaching of others” (p. 173). This stresses that no single method is correct and that a full discussion brings all voices to the table. The success of this type of discussion is entirely the responsibility of the facilitator, who must provoke discussion, yet ensure that everyone’s opinion is heard.

After the initial meeting, we email what is expected of all the participants:

- attend as many observations and discussions as possible;
- write reflections of the Lecture Club at the end of term (Cosh, 1999 emphasizes the importance of this for the self-developmental model);
- respect participants as collegial professionals; and
• honour the invitation that has been extended to our program to attend someone's class.

We also send an email to each of the instructors defining their role and thanking them for allowing the group to attend their class.

An ideal schedule has been found to have one observation about once every two weeks, followed by a discussion (of about one hour) held two or three days later at a mutually convenient time. It is unlikely that the participants’ own timetables will allow them to attend all scheduled observations but we do encourage them to attend as many as possible. On occasion, we have encouraged a potential absentee to pro-actively catch an earlier class by the same instructor, so that the participant can still contribute to a meaningful discussion\(^2\). Indeed, such a two-pronged approach to the observation can, during discussion, refute or augment comments pertaining to the repeated practice of an instructor. However, we maintain that it is more useful to have most observers attend the same class.

The volunteer instructors have not been selected for any special qualities. Diversity of topic has been a major criterion, and this naturally brings some inevitable diversity in teaching style. We have not found a class that does not generate enough discussion material for the group. In our experience, availability and willingness have strongly influenced the schedule.

During the discussion, one person will take notes and display them on a screen for all to see. Often, the recorder is not the facilitator, as the latter may well need to concentrate on the matter in hand viz maintaining an appropriate focus to the discussion. After the meeting, the notes are tidied and sent electronically to all those present. These may be used by the participants at the end of term when constructing a personal reflective piece on their involvement in the Lecture Club. We have encouraged peer reviewing of such articles, since all, or part, may end up in a dossier or similar document.

Some instructors expect, or wish, for some direct feedback from the observers, but we have not yet done this. Where feedback has been requested, private observations have been arranged with an educational developer. A general summary from the individual reflective articles has been written and circulated to the instructors as a group (Secanell, 2007). Naturally, these are not sufficiently specific to allow identification by another reader.

As in all of our workshops and programs, we have found it useful to acknowledge participation with an informal certificate issued by the Centre. This serves to act as a reminder to participants to include the record of such activity in their teaching portfolios. Where possible, we present these certificates in a social setting, preferably through the hands of a senior administrator. This helps to raise the profile of the program and to inform Deans and Directors so that they can encourage others to consider these avenues of professional development. In the pilot program during the summer of 2007, we issued five certificates, and for the spring 2008 session, we issued four certificates. Usually failure to write the reflective piece, often due to non-attendance at the majority of the visits, resulted in non-completion of the Lecture Club requirements.

### The Self-Developmental Model

The Lecture Club is demonstrative of the self-developmental model of peer observation. As explained previously, Cosh (1998) suggests that the self-developmental model should provide the opportunity for active engagement by the observer, who must be non-judgmental and encourage self-reflection about one’s own teaching. Cosh (1999) underscores the notion that one cannot ‘develop’ the teaching of another, only influence.

It is therefore possible to identify certain char-

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\(^2\) An observer who unexpectedly misses the class may be able to catch a subsequent class prior to discussion time; we recognize that it is almost impossible to expect all observers to be able to attend all sessions. This should be considered when the facilitator is scheduling the total number of observations for the term.
acteristics of peer apprenticeship within this self-developmental model. It can enhance and inform the participants’ own teaching methods and open possibilities of different methods and ideas (this includes observing teaching performance, context of the class, student interaction, technology used, method of questioning, group work situations, etc.). This leads to an enhanced and broadened perspective on teaching, which is evident through personal development and the reflective writing document. All that is necessary is that participants bring to the process an open mind, an ability to experiment, and a willingness to expand their disciplinary boundaries. The only risk is if a participant lacks the capability to be self-aware and critical and therefore will benefit less from such a program.

Outcomes, Other Forms, and Further Development

A significant strength of the Lecture Club is in its breadth across disciplines. Participants often commented on how the experience was invaluable for opening their minds to alternative ways of presenting their material. Other comments have included confirmation of their own teaching methods, camaraderie felt by sharing methodologies with colleagues, and gratitude to the teachers who opened their classrooms to them.

Due to the Lecture Club’s success, and to the value recognized in focusing the interest of a particular group, we have run a spin-off program called Lab Gab for concentrating on the special needs of teaching in a laboratory or tutorial. In the version that we have run (summer 2008), the group of observers (three academic and two sessional staff) met with the laboratory course coordinator for about 30-45 minutes before the class started and then observed a class in progress (or part thereof) with the regular instructor, who was typically not the course coordinator. The purpose of the first meeting was to gain insight into the details of the course structure and to determine the rationale behind the program. This was particularly pertinent in our institution as there is no standardization, even within a single department. We chose to use the term ‘lab’ very loosely, and included courses that involved any form of workshop, studio, or tutorial, as well as the traditional science and engineering labs. Other than this special focus, Lab Gab followed the Lecture Club format very closely.

To enrich the Lecture Club further, we offer the following suggestions: 1) expand discussion about the act of observing prior to the first lecture visit. As Cosh (1999) notes, most teachers have not observed or been observed by their peers before, thereby lacking knowledge about their role as a learner/observer in this situation. This would alleviate any false assumptions of the objective of the observation; 2) ensure that all observers are aware of the realm of peer observation and its history. This would allow participants to situate differences with this model, especially if any had been involved in some form of peer observation in the past, structured or not; 3) include literature about lecturing, teaching methodologies, and peer observation before the Lecture Club commences, for those who are interested in supplementing their experience; 4) the possibility of running different streams of Lecture Clubs could also be implemented. In one particular session, the disparity in experience amongst participants brought this idea forward. Even though each participant is to take what they can from the lecture visit for their own self-development, it is evident in the post-visit discussion that a wide range of teaching experience creates a similar breadth in the reflections of an observation. The suggestion has been put forward to run one session for TAs, graduate students, new instructors, and another session for faculty; and 5) a yearly post-Lecture Club meeting would add insight to how the program affected participants. Since our Lecture Club has only run one full year, we have not had a chance to solicit information from past participants regarding the impact of the program. This is something that must be developed.

References


### Biographies

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Greening the 2008 STLHE Conference: Sustainability as a Teaching and Learning Challenge

Lindita Prendi, Beverley Hamilton, & Paul Henshaw
University of Windsor

Conferences are a great way to exchange ideas, communicate research findings, network, and more. However, as a teaching and learning community, we are becoming increasingly aware of the importance of environmental sustainability. The 2008 Society for Teaching and Learning in Higher Education conference organizers chose A World of Learning as its central theme, evoking the challenges and possibilities of internationalization and globalization in post-secondary settings and encouraging presenters to explore the impact of these trends in colleges and universities. As the conference program began to evolve, it became clear that the theme also represented an important opportunity to consider the ecological impact of this annual event. This paper examines the intent, outcomes, and implications of the initiative, illuminating the ways in which initiatives that, at first glance, appear logistical and material-based, are in fact better understood as changes in individual, community, departmental, and institutional values and practices. The potential of projects, such as this one, to function as co-curricular teaching and learning opportunities in promoting institutional change is also explored.

Introduction

From the earliest planning stages, the organizers of the 2008 Society for Teaching and Learning in Higher Education (STLHE) conference were determined to limit its environmental impact. The conference was, after all, focused on the theme A World of Learning – it seemed to be the perfect opportunity to move towards sustainable practices on the wider scale, both for the conference and for the University of Windsor’s campus. This paper charts the initiative’s challenges and successes.

A Heavy Footprint

Conference-related travel, disposable dishware, handouts, conference giveaways, disposable food, beverage
packaging, waste food from catered sources – the average conference-goer produces waste and consumes energy at a rate well beyond that individual’s typical environmental ‘footprint.’ When researchers calculated the footprint of a smaller, two-day conference in Scotland, they determined that the energy use and waste production involved per capita was higher than the equitable ‘earthshare’ per person, per day (SDRC, 2006). Conference-goers generally use disposable materials, like dishware, which uses energy and natural resources at an exorbitant rate. The Environmental Defence Council, for example, argues that using 1,000 disposable plastic teaspoons consumes “over ten times more energy and natural resources than manufacturing one stainless steel teaspoon and washing it 1,000 times” (Desmond, 1998). David Suzuki noted that meetings “leave a heavy footprint on the environment” (Doyle, 2006).

When we began to develop a plan of action for greening the conference, we asked ourselves what the most environmentally friendly event we could run would be like. This frankly prompted the answer, “No conference at all.” Yes, technologies such as videoconferencing, online synchronous and asynchronous discussion, teleconferencing, wikis, and virtual learning environments offer alternatives to the traditional face-to-face scholarly or professional conference, providing comparable opportunities for presentation, dissemination, and even networking. However, these media cannot replicate the interactions and outcomes of face-to-face conferences (Jones, 1995; McLaughline et al., 1995). Virtual environments continue to evolve in their capacity to represent shared spaces: constructing 15 simultaneous sites for groups of between two and 400, providing comparable visual and interactive environments remains beyond reach. For most conference goers, the opportunity to meet face-to-face with old and new colleagues is an important, even indispensable, part of the event.

Although still a new area, the green conference movement has spawned a number of useful guides such as the Green Meeting Guide (Environment Canada, 2007), which provides clear and detailed information regarding the ‘what’ of conference greening. Still, there are many unknowns and challenges that conference organizers face when working toward the greening of an event. The navigation of the higher education institutions’ setting was simply not something these guides covered, and overcoming these challenges can be seen as a learning opportunity.

**Conference as Microcosm: Greening as Curriculum**

For the past 27 years the STLHE conference has brought together educators, administrators, students, and staff to exchange ideas and share experiences related to teaching and learning in higher education. The 2008 conference theme, A World of Learning, demanded greater awareness of the ecological impact of this annual conference, which in 2008, involved 475 participants from ten countries. The immediate goal, therefore, was to reduce the impact of the conference on the local environment. We also hoped to measure the impact of our efforts and to use this data and this pilot project to establish lasting changes in campus practices.

Greening a campus is logistical and curricular. Environmental pollution and resource management are not just technical fields: there are social, political, and ethical aspects to be considered, and integrating these diverse fields in a practice is challenging. Another approach is to alter curricula to infuse environmental principles into our course content and teaching practices. The challenge lies in how to integrate all these aspects into our curriculum to teach to our students, and in determining the scope of the curriculum: if students in an environmental engineering or law program explore the complexities of environmental practice in class, but emerge from their classes to face a campus that contradicts such values, to what degree does this divide shape their learning? Does it become an opportunity for cynicism, or for activism?

As we pursued our goal of greening the conference, we learned about the potential that such initiatives have as opportunities to test theoretical knowledge in real world contexts. Altering conference goers’ habits and practices required knowledge of the culture and structure of the conference-attending community, the hosting organization, and avail-
able local resources. Also, the important question of 'how much greening' needed constant reconsideration and reflection. The organizing committee hired an environmental coordinator, a doctoral student in environmental engineering, to take on the task of planning, implementing, and assessing the green initiative. She worked in collaboration with Centre for Teaching and Learning (CTL) staff to establish procedures and policies. This process served as an excellent learning opportunity for all, as her technical expertise acted as a strong balance to the knowledge of campus procedures and culture that CTL staff brought to the project. In this way, the project served as a useful case for determining the kinds of learning that a greening initiative of this type might have to offer. The next section will examine the intent, outcomes, and implications of the initiative.

Summary of Green Conference Initiatives

Figure 1 illustrates the Green Initiative vision statement and objectives, which emerged out of discussion with the organizing committee, the greening committee, and review of green conference literature.

Minimize waste generation and energy use

The following initiatives were undertaken for the conference in order to minimize waste generation and energy use:

- Biodegradable dishware and cutlery were used, made from renewable materials such as corn and sugar cane (bagasse). Comparable

To minimize our waste generation and use of energy
- Water coolers
- Recycled paper
- Compostable plates and cutlery
- Composting
- Neck wallet re-use
- Bag re-use
- Programme recycling
- Electronic promotional material
- Paperless program option

Transform thinking
- Web information
- Onsite representatives and information
- Programme information

Establish lasting environmental legacies
- Tree planting
- Changes in University practices
- Data collection
- Conference report

**Figure 1:**
Vision Statement and Objectives of the STLHE Green Initiative
Greening the 2008 STLHE Conference

in cost to conventional products, the rising cost of petroleum-based products made these even more cost-effective (NatureWorks, 2008). Dishes were composted through the Windsor-Essex Waste Authority Composting Pilot Program: this also involved the use of biodegradable refuse bags throughout the conference.

- Water coolers were provided so that participants could use re-usable water bottles (conference give-away) rather than disposable individual containers.
- Where health rules allowed, condiments, etc. were served from large containers.
- During pre-registration, participants could select a paperless program option (conference materials on USB stick) and online personal scheduler (MySchedule). Hard copies of the program were printed on recycled paper, with the exception of the covers and dividers.
- Limits were placed on the use of hard-copy publicity.
- All documents were printed on recycled paper.
- Speakers were encouraged to reduce reliance on printed handouts.
- Recycling receptacles were available in all rooms, including composting receptacles.
- Program conference materials (bags, wallets, and notebooks), which were not used or which were returned, were donated to local community organizations, or collected for future use by the CTL and other University departments.
- Energy savings were implemented through room temperature moderation and turning off lights when not needed.

Transforming thinking

Many aspects of conference activity are habitual. We encouraged conference participants to choose environmentally friendly travel options through the conference website, and made bicycle rentals available. We offered a carpool sign up, and encouraged people to limit their own ecological impact while in Windsor through hotel and transportation selection. Many of these initiatives had limited uptake, but their use could increase with familiarity and repetition.

Dedicated greening volunteers were also on-site, gathering data from participants, ensuring that the initiatives ran smoothly, and answering participant questions. These volunteers were vital in ensuring that changed procedures were understood and in solving emerging problems. More volunteers would have helped with more complex aspects of the initiative, like composting.

Establishing lasting legacies

In an effort to offset future carbon dioxide emissions, the greening committee arranged for the donation of 25 trees to the university from the Essex Regional Conservation Authority (ERCA). The University’s Ground and Environmental Services department has agreed to care for them until they are ready for planting. As well, the University donated a tree for immediate planting at the conference; this tree symbolized both the greening initiative, and the larger initiative of the growth and dissemination of knowledge.

Other legacies are less tangible, but no less significant. Data regarding the ecological impact of the conference, and the initiative’s inclusion in the STLHE conference report, promote the integration of these practices into future conferences. On campus, individual departments, catering, and conference services have contacted the environmental coordinator to discuss the feasibility of green alternatives. Co-operation in the Windsor-Essex composting pilot program has increased campus awareness of options previously believed to be impossible.

Learning from Challenges

Studies of environmental psychology indicate that, although people are generally aware of environmental problems ranging from local to global issues (McKenzie-Mohr as cited in Berenguer, 2007), responsible environmental behaviour is not the norm. Christensen (2007) suggests identifying minimum best-practice options, and low- or no-cost measures that can be
readily implemented with strong return on investment. In general, the most easily implemented measures were those that were not considered out of the ordinary and had little effect on the operation of the conference or participant behavior, such as the use of recycled paper, recycling boxes for unused programs, electronic promotion material and information dissemination, and electronic registration.

The committee often discussed potential ‘push-back’ from participants frustrated by changes to standard conference practices and resource limitations. Determining reasonable changes was often a challenging process, requiring creative problem solving from everyone. The committee determined what could be reduced, reused, or recycled – the three goals arranged in declining order from most to least optimal. For example, when a sponsor’s donation of conference material precluded the purchase of bags made entirely from organic or recycled materials, the committee established a re-use program to collect and donate the materials to a local organization that supports the professional integration of new Canadians.

Another aspect involved the complexity of effecting change in institutional practices. For example, the committee initially advocated for china service, but Catering Services argued that china service for 500 was not feasible, and instead proposed corn and bagasse–based plastic plates. These options had previously been examined, but were dismissed due to relative energy use, the potential for allergens, and the difficulty of composting the dishes, which would require biodegradable bags and an elevated temperature composting facility. The Windsor-Essex composting pilot was then found to accept and properly compost the material. This compromise demanded research and involvement from catering, conference services, janitorial staff, and those responsible for University waste removal. The number of departments involved can be found in Table 1 and the decision-making process is delineated in Figure 2. A further element of this educational process involved ensuring that conference participants learned to use the composting bins properly (dishware and some food could be recycled, but not meat). Dishware items were taped to organic waste bins to identify them as being compostable, posters were displayed, and volunteers were

### Table 1

**Departments and Organizations Involved with the Composting Initiative**

<table>
<thead>
<tr>
<th>Departments at the University</th>
<th>Outside the University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounds-Environmental Services Department</td>
<td>ERCA</td>
</tr>
<tr>
<td>Conference Services</td>
<td>Forestry Department of the City of Windsor</td>
</tr>
<tr>
<td>Custodial Services-Environmental Services Department</td>
<td>Essex-Windsor Solid Waste Authority (EWSWA)</td>
</tr>
<tr>
<td>Energy Conversion Centre</td>
<td>Walmart</td>
</tr>
<tr>
<td>Catering Services</td>
<td>Home Depot</td>
</tr>
<tr>
<td>Great Lakes Institute of Environmental Research (GLIER)</td>
<td>Canadian Tire</td>
</tr>
<tr>
<td>University Advancement</td>
<td>Radisson and Hilton Hotels</td>
</tr>
<tr>
<td>Finance</td>
<td>Parks and Recreation Department (City of Windsor)</td>
</tr>
<tr>
<td>Volunteer Internship Program</td>
<td>Courtesy Bicycles</td>
</tr>
<tr>
<td>Environmental Engineering Programs</td>
<td>TD Friends of the Environment Fund</td>
</tr>
<tr>
<td>Alumni Hall (residence)</td>
<td></td>
</tr>
</tbody>
</table>
available for help. Still, some items were disposed as regular garbage. Clearly, dissemination of information is essential.

Challenges: The Learning Opportunity

As the previous section will attest, there are ample opportunities for growth, reflection, and skill development involved in working to establish even one element of such an initiative. The composting processes, for example, provided opportunities to hone communications and collaborative skills, employ and develop research and critical thinking skills, and expand technical expertise in the requirements and methods of composting. At every stage, the cycle of collaboration served as a real-time setting for reflec-
tive thought and critical evaluation of ethical and logistical dilemmas. The project required creative problem solving and a resilient approach to overcoming barriers. A key to successfully incorporating this kind of initiative into more formal curricula would be to identify skills to be developed and assessed. The CTL staff and the greening committee were, at times, surprised by unexpected setbacks and unexpected support, and while diplomacy and flexibility were two characteristics of this project, repeated involvement in similar projects would have helped predict challenges.

Participant Feedback: One Measure of Success

Compiled data from conference evaluations indicated that 78% of respondents were very pleased with the greening measures and felt that the initiative enhanced their conference enjoyment.

Comments like “please continue in future STLHE conferences” and “great job” were very encouraging. While some appreciated the greening initiative’s consistency with their typical practice, others saw it as something different – they were not “used to it,” but were eager to do their share to lessen the environmental burden while attending conferences like this one. Figure 3 summarizes evaluation responses to the green initiative. A limited number indicated strong disagreement with the environmental initiative, commenting, for example, that they found it “obnoxious” and “overdone.” Similarly, responses to specific aspects of the greening initiative indicated varied awareness of the complexities of greening:

- Some participants felt that the USB sticks and personal scheduler were much less practical than envisioned, others found them effective, and still others felt that they might work effectively combined with hardcopy daily summaries and centralized printing stations. Some also questioned whether the re-usable USB stick was more environmentally friendly than hard copy programs. Participants held strong but diverse views regarding these initiatives. Technological initiatives involving the ways people organize their learning plans and accessed information about the conference required more pre-conference communication explanation. Highly visible technical support would have been of benefit.

- While some participants indicated that they would be taking the idea of biodegradable dishware back to their campuses, others felt that the corn-based dishware used resources that could be put to better use feeding people, rather than being embodied in single-use products. Participants noted that the biodegradable cups, used for coffee, softened and leaked over time. More product testing would have been of benefit.

- Some participants questioned whether certain green choices were truly ‘green,’ for example, whether the ‘compost’ was truly composted, and in what way? Some questioned the effectiveness of a carbon offset option, a somewhat controversial practice in environmental circles. Critics argue that carbon offsets do not reduce the problem of climate change, and further, some programs are more legitimate than others in this regard. Although carbon offset is a popular approach to neutralize environmental impact, choosing projects that fulfill the most recognized standards and criteria is imperative.

Conference-goers’ responses to the initiative truly reflected the range of opinions typical of any complex social issue involving changing behaviours. Interest in, and critical awareness of, environmental practice varies, making it difficult to develop plans that satisfy all parties involved. For the majority, it appeared to have struck the right balance. With each future conference, it will be possible to shift the parameters of what is considered ‘normal practice’ in the direction of greater sustainability.

Prioritizing initiatives is not a simple process. It involves identifying: potential areas for change; parties involved; barriers to the change; sources for
materials and services; and negotiation of groups with varying commitments to the initiative. While Christensen (2007) suggests implementing wholesale change as the most efficient way to adopt environmentally sustainable conference practices, this was not our experience on a university campus where essentially independent departments provide event support. Conference feedback did not indicate that this would have been a preferable approach.

In retrospect, the extremely diverse voices involved in the planning process predicted likely points of tension for conference-goers as well. Members of the organizing committee felt that an entirely paperless or a half-size program would be too frustrating for many participants. The greening committee then proposed alternatives such as the choice of an electronic version, the use of 100% post-consumer paper, and the opportunity to recycle.

Inevitably, some decisions made in this context were not those others would make. Although these decisions were explained in the conference documentation, feedback indicated that more information and varied avenues of communication would have been of benefit. A conference presentation dedicated to the green initiative was poorly attended due, in part, to the competition of excellent simultaneous presentations. In spite of this, more varied and sustained communication would certainly improve the chances of uptake and satisfaction. The greening committee learnt that change is, at its core, a process of communication, of clarifying options, creating community, identifying values, and explaining practices. As a learning process, such projects offer profoundly valuable opportunities to reflect upon the social nature of sustainability, and the complex variety of values and practices typical of all communities. This project prompted a critically reflective stance, primarily through the ongoing negotiations.

**FIGURE 3**

*Degree to which the Greening Initiative Affected Participants’ Enjoyment*
between all parties involved to make it a success, requiring constant willingness to consider others’ perspectives, needs, and resources.

Greening initiatives should be understood as a full program of integrated activities. To effect lasting change in institutional practice, departments need ongoing support. In the past few years, many universities have embraced environmentally sustainable projects and operations. In most cases, these projects have been isolated from the rest of the institution’s activities. Often, sustainable initiatives go unnoticed and their impact is low (Hailey, 2008). Hailey suggests that “the next step is to go beyond these often separate and isolated projects to incorporate a systemic and integrated approach that sees sustainability become integrated into all the functions of a university.” A conference can be an impetus to change, but discrete elements of a larger initiative adopted without integrated support have limited impact. Replacing disposable cups with biodegradable ones changes the resulting waste very little unless implemented with a composting program using biodegradable bags. Such an initiative, therefore, requires ongoing interdepartmental co-operation on the establishment of waste streams. Integration of these more holistic objectives into formal curricula could be mutually beneficial.

Conclusions

The decision to embark on an initiative such as greening involves subtle and reflective reading of the existing culture, its potential for change, available resources, conflicts between conference-goers’ needs and practices, and the changes initiated. While assessing available options requires technical expertise, true and lasting change emerges primarily through working with others, understanding how organizations function, and how communities and individuals work. Likewise, student and staff learning emerged in this case from the process of working through technical options in a diverse social and institutional context. For the greening committee, communication processes surfaced as a key growth area, requiring patience and reflection, multiple avenues, long-term planning, foreseeing challenges and frustrations, and real-time maneuverability during the conference itself. The lessons learned from this project will add to the reserve of knowledge augmenting our institution’s environmental pinnacle in its ongoing effort to establish and understand the interactions between learning, logistics, and practice in campus sustainability initiatives.

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