2012 AAU Teaching Showcase/ Expo-Enseignement 2012 de AUA

Proceedings/Actes

Editors/Rédacteurs en chef:

James Whitehead, Associate Professor, Director of Teaching and Learning, Professeur Agrégé, Directeur de l’enseignement et de l’apprentissage, St Thomas University

Dawn McIsaac, Professor, Computer Science, University of New Brunswick Professeur, l’Informatique, Université du Nouveau-Brunswick

Fredericton, New Brunswick, Canada

On behalf of the Association of Atlantic Universities Co-ordinating Committee on Faculty Development

Au nom du comité pour le développement professionnel de l’association des universités de l’Atlantique

Volume XVI  June 2013/juin 2013
This publication was made possible by The Association of Atlantic Universities, St Thomas University and the University of New Brunswick. Cette publication a été rendue possible grâce à l’Association des universités de l’Atlantique et l’Université de Nouveau-Brunswick et l’université de St Thomas.

Association of Atlantic Universities/Association des universités de l’Atlantique
Suite 403, 5657 Spring Garden Road
Halifax, Nova Scotia/Nouvelle Ecosse
B3J 3R4
Phone: (902) 425-4230
Fax: (902) 425-4233
info@atlanticuniversities.ca
http://atlanticuniversities.ca

University of New Brunswick/ l’université du Nouveau-Brunswick
Centre for Enhanced Teaching and Learning/Centre pour l’enseignement et l’apprentissage améliorés
P.O.Box 4000, Fredericton, NB/N.-B.
E3B 5A3
(506) 453-4666

St Thomas University/ l’université de St. Thomas
Learning and Teaching Development Centre/Centre de développement de l’enseignement et l’apprentissage,
51 Dineen Drive, Fredericton, NB/N.-B.
E3B 5G3
(506) 452-0640

Web: http://aaushowcase2012.ca
Email: aaushowcase2012@stu.ca

Managing Editors/Rédacteurs en chef: James Whitehead (STU) and Dawn MacIsaac (UNB)

Layout/Conception et mis-en-page: James Whitehead (STU)

Recommended Citation/Citation recommandée
Copyright/droit d’auteur © 2013 by the authors and the Association of Atlantic Universities/Les auteur(e)s et l’Association des universités de l’Atlantique.
Association of Atlantic Universities/Association des universités de l'Atlantique
16th Teaching Showcase/16 ième Expo-Enseignement

University of New Brunswick/St Thomas University
l’université de Nouveau-Brunswick/l’université St. Thomas

Fredericton, New Brunswick/Nouveau-Brunswick

Saturday, October 13, 2012
le samedi 13 octobre 2012

Teaching Showcase Planning Committee
Comité d’organisation pour l’Expo-Enseignement

James Whitehead, Director of Teaching and Learning, St Thomas University
Dawn MacIsaac, Centre for Enhanced Teaching and Learning (CETL), UNB
Ken Reimer, Director CETL, UNB.
Nancy FitzPatrick, Coordinator, CETL, UNB.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>5</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>6</td>
</tr>
<tr>
<td>AAU TEACHING AWARD RECIPIENTS, 2012</td>
<td>8</td>
</tr>
<tr>
<td>SHOWCASE IN PICTURES</td>
<td>8</td>
</tr>
<tr>
<td>FULL PAPERS</td>
<td>9</td>
</tr>
<tr>
<td>CARING + CURIOSITY + CLASSROOM = CONVERSATION, COMMITMENT, COMMUNITY</td>
<td>10</td>
</tr>
<tr>
<td>Diana Austin, University of New Brunswick (Fredericton)</td>
<td></td>
</tr>
<tr>
<td>CONTINUING THE CONVERSATION WITH MASTERINGCHEMISTRY™</td>
<td>17</td>
</tr>
<tr>
<td>Katherine Darvesh, Mount Saint Vincent University</td>
<td></td>
</tr>
<tr>
<td>A TALE OF TWO (DISTANCE) COURSES</td>
<td>23</td>
</tr>
<tr>
<td>Michelle Eskritt, Mount Saint Vincent University</td>
<td></td>
</tr>
<tr>
<td>Tanya Crawford, Mount Saint Vincent University</td>
<td></td>
</tr>
<tr>
<td>TEACHING AS STRUCTURED IMPROVISATION</td>
<td>31</td>
</tr>
<tr>
<td>Martin Kutnowski, St. Thomas University, Fredericton</td>
<td></td>
</tr>
<tr>
<td>CURRICULAR PEER MENTORING: ADAPTING ACROSS UNIVERSITIES</td>
<td>39</td>
</tr>
<tr>
<td>Kat Lord, Memorial University of Newfoundland</td>
<td></td>
</tr>
<tr>
<td>PROFESSIONAL-GRADE CONVERSATIONS: ENGAGING ONLINE STUDENTS WITHIN AN ACADEMIC CONFERENCE FRAMEWORK</td>
<td>51</td>
</tr>
<tr>
<td>Peter D. MacIntyre, Cape Breton University</td>
<td></td>
</tr>
<tr>
<td>PRODUCING AN ONLINE ARCHIVE OF ATLANTIC CANADIAN POETS IN THREE PARTS</td>
<td>59</td>
</tr>
<tr>
<td>Lisa Banks, St Thomas University</td>
<td></td>
</tr>
<tr>
<td>Patrick O’Reilly, St Thomas University</td>
<td></td>
</tr>
<tr>
<td>Kathleen McConnell, St Thomas University</td>
<td></td>
</tr>
<tr>
<td>ADDRESSING THE ISSUE OF CYBER-BULLYING WITH UNDERGRADUATE NURSING STUDENTS</td>
<td>64</td>
</tr>
<tr>
<td>Sheila Profit, Cape Breton University</td>
<td></td>
</tr>
<tr>
<td>Barbara Jamieson, Cape Breton University</td>
<td></td>
</tr>
<tr>
<td>ON THICK ICE: A FRAMEWORK FOR ASSESSMENT &amp; FEEDBACK</td>
<td>69</td>
</tr>
<tr>
<td>Heather Sparling, Cape Breton University</td>
<td></td>
</tr>
<tr>
<td>FACILITATING EFFECTIVE WHOLE-CLASS DISCUSSIONS: STRATEGIES FOR SCIENCE EDUCATORS</td>
<td>81</td>
</tr>
<tr>
<td>Grant Williams, St. Thomas University</td>
<td></td>
</tr>
<tr>
<td>SHORT PAPERS</td>
<td>90</td>
</tr>
<tr>
<td>RESOLVING CONFLICT IN THE CLASSROOM – WALKING THE EXPERIENCE CUBE</td>
<td>91</td>
</tr>
<tr>
<td>Scott Comber, Dalhousie University</td>
<td></td>
</tr>
</tbody>
</table>

*AAU Teaching Showcase STU & UNB, Fredericton, 2012*
CREATING A PARTICIPATORY ONLINE CLASSROOM: REFLECTING ON FACE-TO-FACE VERSUS ONLINE DELIVERY OF A HISTORY COURSE  
Stephen Dutcher, University of New Brunswick (Fredericton)  
95

WORKIN’ GROUPS: STRATEGIES FOR SUCCESSFUL COOPERATIVE LEARNING  
Reina Green, Mount Saint Vincent University  
98

TONGUE-TIED IN MATHEMATICS  
Andrew Hare, Saint Mary’s University  
104

ONE-ON-ONE CONVERSATIONS WITH STUDENTS IN LARGER CLASSES  
Angela M. Kolen-Thompson, St. Francis Xavier University  
109

PEER-ASSISTED FEEDBACK: CONVERSATIONS IN THE CLASSROOM AND AMONGST THE RESEARCHERS  
Ishita Siddiq, Dalhousie University  
Deborah Day, Acadia University  
Kim Blake, Dalhousie University  
111

THE “FURIOUS FIVES” ………………………………………………………………………………………………………………….. 116

The Creative Book Report: Fostering ‘right-brain thinking’ in a business curriculum  
Jenny Baechler, Dalhousie University  
117

Projected Themes: Using visual cues to inspire conversations in the classroom  
Stephen Hare, Madeline Symonds Middle School  
117

The Importance of Saying “Hello”  
Angela (Angie) M. Kolen-Thompson, St. Francis Xavier University  
118

Using the primary literature to promote conversation in the classroom  
Erika F. Merschrod, Memorial University of Newfoundland  
119

ABSTRACTS …………………………………………………………………………………………………………………….. 120

PARTICIPANTS CONTACT INFORMATION …………………………………………………………………………….. 134
# ACKNOWLEDGEMENTS

<table>
<thead>
<tr>
<th>Logistics</th>
<th>Room Hosts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Annett</td>
<td>Kevin Cormier</td>
</tr>
<tr>
<td>Patrick McCullough</td>
<td>Michael Holmes-Lauder</td>
</tr>
<tr>
<td>Magdalen Normandeau</td>
<td>Rebecca Hamm-Brown</td>
</tr>
<tr>
<td>Chris Saad, Black Box Theatre IT and Sound</td>
<td>David Kilfoil</td>
</tr>
<tr>
<td>Ilkay Silk, Black Box Theatre</td>
<td>Janet Mullin</td>
</tr>
<tr>
<td></td>
<td>Brad Votour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IT Support</th>
<th>Proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlene Chapman</td>
<td>Hannah Gray</td>
</tr>
<tr>
<td>Brian Mitton</td>
<td>Nancy FitzPatrick</td>
</tr>
<tr>
<td>Tom O'Brien</td>
<td>Dawn McIsaac</td>
</tr>
<tr>
<td>Kyle Pozer</td>
<td>Magdalen Normandeau (translation)</td>
</tr>
<tr>
<td>Greg Rodger</td>
<td>James Whitehead</td>
</tr>
<tr>
<td>David Canam (online Conversation Wall)</td>
<td></td>
</tr>
</tbody>
</table>

**Our reviewers (in alphabetical order)**
Catherine Aquino-Russell (UNBF), Rohini Bannerjee (SMU), Judy Buchanan (UNBSJ), Amy Carrier (UNBF), Autumn-Marie Chilcote (UNBSJ), Brenda Collings (UNBSJ), David Creelman (UNBSJ), Deborah Day (Acadia), Greg Fleet (UNBF), Catherine Reina Green (MSVU), Lynne Goulquier (STU), Alyson Hajek (MUN), Mark Henderson (UNBF), Eileen Herteis (MtA), Russ Hunt (STU), Diane Janes (CBU), Angie Kolent-Thompson (St. FX), Robert Lapp (MtA), Peter MacIntyre (CBU), John-Grant McLaughlin (UNBF), Anne Murray Orr (St. FX), Sharon Murray (STU), Magdalen Normandeau (UNBF), Rosemary Pologato (MtA), Toni Roberts (Mt.A), Andrea Schultz (STU), Kate Thompson (Dal), Gabriela Tymowski (UNBF), Grant Williams (STU), Shaunda Wood (STU).

**Proof-Readers (in alphabetical order)**
John Grant McLaughlin (UNBF), Linnet Humble (STU), Kathleen McConnell (STU), Dawn McIsaac (UNBF), Andrea Schultz (STU), Doug Vipond (STU), James Whitehead (STU)
INTRODUCTION

The 2012 AAU Teaching Showcase was co-hosted October 13 by St Thomas University and the University of New Brunswick in Fredericton, NB. The theme for the conference was ‘Conversations’, and included nine 50-minute presentations, thirty-four 25-minute presentations, five Furious Five (5 minute) presentations, and engaging conversations both online (using our Conversation Wall) and face-to-face. A selection of the presentations are represented by the sixteen articles contained in these Proceedings.

You will find four types of articles: Short-papers (<1000 words); full-papers (<4000 words); one-page extended abstracts of the ‘Furious Fives’; and the unedited abstracts of the remaining presentations. Each contribution focuses on an aspect relating to the ‘Conversations’ theme, including: conversations in the classroom; conversations about the classroom; conversations with technology; and conversations about ideas that matter.

The sixteen short- and full-papers cover a range of topics: Angie Kolen-Thompson tackles issues related to one-on-one conversations with students in larger classes. Stephen Dutcher, Michelle Eskritt, and Peter MacIntyre address maintaining conversations in an online setting, and Sheila Profit extends the online discussion to include the issue of cyber-bullying. Reina Green and Scott Comber both make interesting suggestions about how to keep the conversation constructive in group learning sessions, and Martin Kutnowski offers a refreshing perspective on how the improvisational moments in teaching sometimes offer the best opportunities for learning. Andrew Hare, Kathleen McConnell, and Kathy Darvesh offer insightful observations about how conversations can, and should be, an integral part in teaching their own disciplines of mathematics, poetry, and chemistry; while Grant Williams illustrates how important conversation skills are to communicating science. Ishita Siddiq explores attempts to implement Peer-Assessment feedback into small group learning sessions, while Kat Lord describes how peer mentoring supports communication. Diana Austin describes how one conversation with an angry student at the beginning of her career transformed her teaching strategy from a one-way knowledge transfer, to a two-way teaching and learning conversation. She offers three practical suggestions for generating, and maintaining, conversation with students.

Anyone who has attended the Showcase over the last few years can attest to the value of the ‘Furious Fives’ – five minute presentations each on a practical teaching tip – they’re very impactful. This year’s submissions were no exception. If you missed them, the summaries contained in these Proceedings are worth reading!

We had an extremely successful showcase this year, sparking many and varied conversations. Contact information is provided for all contributors to these proceedings and our hopes as co-chairs of the showcase, and editors of the Proceedings, are that we use the contact information to keep the conversations flowing.

Dawn MacIsaac (UNB) and James Whitehead (STU)
INTRODUCTION

L'expo-enseignement 2012 de l'AAU a eu lieu le 13 octobre, 2012, à Fredericton, N-B, sous les auspices de l'université St Thomas et de l'université du Nouveau-Brunswick. Cette conférence ayant pour thème "conversations" a inclus neuf présentations de 50 minutes, trente-quatre présentations de 25 minutes, cinq présentations de 5 minutes (les 5 Effrénées) et d'intéressantes conversations en ligne (par le biais de notre "mur de conversation") et en personne. Les seize articles ci-inclus représentent un sous-ensemble de ces activités.

Vous trouverez quatre types d'articles: de courts articles (<1000 mots), des articles plus longs (<4000 mots), des résumés élaborés pour les présentations de cinq minutes et les résumés originaux pour les autres présentations. Chaque contribution se concentre sur un aspect du thème "conversations", que ce soit des conversations en classe, des conversations au sujet de ce qui se passe en classe, des conversations usant de technologie, ou des conversations au sujet d'idées importantes.

Les seize articles couvrent une variété de sujet. Angie Kolen-Thompson s'attaque aux difficultés liées aux conversations avec des étudiants individuels dans le cadre de cours où les étudiants sont nombreux. Stephen Dutcher, Michelle Eskritt et Peter MacIntyre discutent de conversations en ligne, et Sheila Profit ajoute à ce thème la problème de la cyberintimidation. Reina Green et Scott Comber fournissent d'intéressantes suggestions visant à assurer que les conversations pendant l'apprentissage en groupe soient constructives. Martin Kutnowski offre une perspective rafraîchissante sur comment l'improvisation pendant l'enseignement peut parfois offrir les meilleurs moments d'apprentissage. Andrew Hare, Kathleen McConnell et Kathy Darvesh discutent de comment des conversations peuvent et même devraient faire partie intégrante de l'enseignement des mathématiques, de la poésie et de la chimie, leurs trois disciplines, alors que Grant Williams illustre l'importance d'aptitudes en conversation pour la communication scientifique. Ishita Soddiq explore des tentatives d'implémenter l'évaluation par les pairs dans des situations d'apprentissage en petits groupes, alors que Kat Lord décrit comment le mentorat par les pairs encourage la communication. Diana Austin décrit comment une conversation avec un étudiant fâché au début de sa carrière transforma son style d'enseignement: au lieu d'un transfert d'information à sens unique, il s'agit maintenant d'une conversation à double sens au sujet de l'enseignement et de l'apprentissage. Elle offre trois suggestions pratiques pour susciter et maintenir des conversations avec les étudiants.

Tous les participants des expo-enseignements des dernières années peuvent témoigner de la valeur des 5 Effrénéées, ces présentations de cinq minutes, chacune offrant une suggestion pratique pour l'enseignement. Ces présentations ont un grand impact et celles de cette années ne font pas exception. Si vous les avez manquées, les résumés dans ce document valent la peine d'être lus!

L'expo-enseignement fut un grand succès cette année, stimulant une grande variété de conversations. L'information sur comment joindre les contributeurs est incluse dans ce document et nous, les co-présidents de la conférence, espérons qu'elle servira à poursuivre les conversations.

*Dawn MacIsaac (UNB) and James Whitehead (STU)*
AAU TEACHING AWARD RECIPIENTS, 2012

The recipients of the AAU Distinguished Teaching Awards for 2012 are presented below. We are grateful for the wonderful plenary panel and discussion they facilitated at the Black Box Theatre, STU as part of the Showcase.

Colin Laroque, Mount Allison University
Geography and Environment Department

Dr. Neil Maltby, St. Francis Xavier University
Gerald Schwartz School of Business

Dr. Heather Sparling, Cape Breton University
School of Arts and Social Sciences

SHOWCASE IN PICTURES
ABSTRACT

This article discusses how my understanding of teaching as two-way conversation, rather than as a one-way knowledge transfer, itself originated in a conversation with an angry student early in my career. By discussing three types of academic conversations that are now key pedagogical strategies in all my courses, and the overwhelmingly positive student responses to these strategies, I hope to show some of the ways that teaching conversations have not only helped me to teach and my students to learn, but also have helped me to learn far more about both teaching and my students than I believe could ever have been possible otherwise. At the very start of my university teaching career, it would never have occurred to me to think about teaching and learning as a “conversation.” I just automatically assumed that the career I was embarking upon was all about what might be called “knowledge transfer.” This, as I understood it, operated as a one-way process: the professor would share with students all the knowledge he or she had acquired through many years of increasingly specialized schooling that had culminated in a doctoral degree. After all, didn’t this formal certification prove that the person at the front of the class deserved to be there because he or she was fully (and solely) qualified to decide what was “important” information worth transmitting, along with the how and the when of such transmission?

Oh, my! Lived reality can find powerful ways of abruptly separating itself from mere conceptualization, and that’s exactly what happened within the first few weeks of my first job teaching at a university, with lasting results. My wake-up call took the form of an extremely uncomfortable conversation with an irate student vehemently disputing what she saw as my unfair essay marking. This awkward exchange jump-started my realization that if I wanted to be effective in my new career as a professor, I had better start reflecting upon the many ways that teaching students was actually going to involve learning from them, which would obviously mean learning how to listen to them. In other words, weeks into my teaching career I learned one of the most important and long-lasting lessons of my professional life: that teaching could be understood and practised as a two-way process, as a “conversation.” Every evolution in my teaching techniques throughout my long career since can be traced to the impact of that initial, painful conversation. I have never stopped trying to figure out new ways of hearing my students’ voices so that my teaching can become an all-encompassing conversation to help me teach more effectively as a result of listening to and talking with (never again at) my students.

Conversation #1: Assessment

My first attempt to tackle teaching as a conversation began (perhaps understandably, given what I had just experienced) with one of the more difficult areas of our profession, assessment. This requirement of our job, as I could wholeheartedly testify only weeks into my career, can alienate students by seeming arbitrary and unfair. Despite the fact that the marking on my irate student’s essay had been supported by many explanatory comments and that I had supplemented these in our subsequent discussion, that did not resolve the matter in her perception; she left my office still extremely upset. Reflecting on the unpleasant encounter led me to start developing an assessment structure to indicate the typical elements expected in a university-level
English essay; explaining these criteria now forms the basis of a conversation I have with my students before they write their first paper. This TOGS structure (4 general categories of Thought, Organization, Grammar, and Style, all provided with some representative subgroups to offer concrete writing tips) has now expanded into a shared, transparent, bidirectional framework that serves both the students for essay-writing and the professor for essay-marking. Students know beforehand the kinds of things I will be looking for in their essays, and when the marked essays are returned, my very detailed, individualized comments make sense to them because they can immediately recognize the categories that need attention and see why. So instead of acting as the catalyst for angry students to march to my office to berate me, my marking techniques now draw positive feedback from students because they perceive TOGS as part of a helpful conversation aimed at assisting their efforts to improve. This surprisingly welcoming reaction to being marked is evident in the comments that regularly turn up on our Department’s anonymous Student Opinion Questionnaire, which is administered without the instructor present and only made available to us after final grades have been posted. For instance, the question “Were the instructor’s comments on your written work helpful? In what ways? Can you suggest improvements?” tends to elicit replies like these unedited examples: “her style of corrections and comments really made me want to do better on my next piece of work”; “Comments on my work were very helpful. She told me what was wrong and helped me with how to fix it”; “She is very thorough in her comments. You know exactly why you got the mark you did”; “always, very specific to where we lost marks & how to improve as well as our strong points”; “Very helpful. I enjoyed reading the comments”; “They were extremely helpful. It’s really appreciated how much feedback was given”; “Yes the comments were good. TOGS helped me see specifics”; “Very helpful; professor clearly cared about student progress and understanding. Lots of progress.” When students use words like “enjoyed” and “appreciated” about the marking of their essays, I feel grateful that TOGS has helped me re-shape the traditionally adversarial process of grading into what students can respond to as a “coaching conversation” rather than as the arbitrary and unfair “judgment” I was seen as meting out at the start of my career. (See Appendix 1:TOGS.)

Conversation #2: Designated Speaking

I confess, however, that despite quickly seeing how creating a clear assessment model and sharing it with students could help re-shape their responses to having their work rigorously marked, there was still a time delay between my beginning to think of teaching as a conversation and my success in actually making it so. Although students always remarked favorably in course evaluations upon the enthusiasm and passion of my teaching, I often felt disappointed with myself because classes were still in practice more obviously “knowledge transfer” than conversations. I think I naively believed that as long as I shared my own passion for the material and warmly encouraged students to participate in the class discussion, they would feel welcome to join in and the idea of classes as conversations would automatically become reality. Eventually, however, I began to notice that in most groups of students, I could probably assume that about a third would always happily dive in to any discussion, about a third would listen quietly, and the remaining third could go either way, depending on the overall atmosphere of the class and their own interest in any given day’s discussion. In other words, if I wanted to teach through conversations, it was up to me to figure out how to create the classroom conditions that would make this the reality for all my students, not merely those with outgoing personalities.

Out of this grew one of my next classroom conversational strategies, what I call Designated Speakers (deliberately named to be as familiar as the societal practice of Designated Drivers). This is a very simple system: it uses the class list as the alphabetical rota for always assigning 3 specific students to start off the next day’s class by offering their views on that day’s material. The key to its
astonishing success, it seems to me, is that by building structured participation into the classroom dynamics, Designated Speakers normalizes participation as an everyday practice from the very start and so helps keep this momentum throughout the term, even after students’ energies start to flag from all the demands in all their courses of assignments, midterms, and final exams. This participation strategy has been consistently popular with vocal and quiet students alike, and I think this is because students see it as proof that I am serious when I say that I want to hear the views of every single one of them.

Even though I offer an alternative mode of participation for anyone who feels too shy to speak in public, over the years only a handful of students have taken me up on this option. Instead what tends to happen is that shy, worried students come in to see me almost immediately to discuss the options, but they end up feeling reassured about what is expected of them and so are willing to give it a try, “just once,” to see how it goes. Since the Designated Speakers are free to choose any approach and are assured that their emotional reactions to anything in the material can be a valid first step in literary analysis, the hesitant students relax, recognizing that no formal, stress-filled presentation is being demanded. The opening student comments (and other students’ reactions to them) are used to structure each day’s class, with every speaker’s contribution validated as important by the discussion we give it; I weave my planned remarks into the discussion the student comments generate. As a result, students of very different personality types all seem to respond to what they perceive as a gentle, genuine invitation to have their opinions heard; they start to view their structured role in class contribution as a recurring opportunity rather than as a burden, and because everybody seems to recognize that this collaborative conversation is crucial to course learning, attendance tends to be consistently (and unusually) high throughout the term.

Conversation #3: Rants & Raves

Designated Speakers, then, has certainly helped me move towards my goal of making my classroom a place where teaching functions as a conversational process, but I have nonetheless often felt that I still haven’t managed to take “teaching as conversation” as far along the road to my desired goals as possible. After all, the kind of teaching I aspire to is an impassioned, collaborative conversation about the whole subject (even the bits students often dislike, such as grammar), with the whole class (which includes students of different interests and abilities), and with the whole student (and students are obviously far more complex than the public selves seen by their peers and their professors in a classroom setting). The teaching outcome I hope for is that both what students learn in my class and how they learn will factor into their critical thinking and their overall lives, in helpful ways, long after they leave formal university education. To make that more likely, students obviously need to engage with course material deeply and on multiple levels. So a few years ago I thought about another stage in the evolution of teaching as conversation that might help increase student engagement and enjoyment. I have always been interested in who my students were outside my classroom, and I decided that this curiosity might be able to help me get a better sense of how my students were thinking and feeling about course material because of their individual personalities and experiences.

Thus began the teaching strategy of building structured individual conversations between myself and each student into course participation in the hope of encouraging them to respond in deeper ways than they might be willing to reveal in the public gaze of classroom conversations. This new activity, Rants & Raves, is an effort to try to persuade all my students to engage passionately with their academic material by giving them licence to respond to the material personally as well as intellectually, inviting heads and hearts to work as a team. Students send me three brief e-mails on course texts, explaining what
they like (a “rave”) or dislike (a “rant”). The R&R exercise is open-ended; one submission a month is required but it can be on their own scheduling; submissions can tackle any angle, however tangentially linked, to the broad subject-matter. The only hard and fast rule is that, as the name suggests, I want to hear each student’s voice speak candidly and passionately (whether pro or con) on his/her selected issue.

The R&R exercise strongly discourages neutrality, objectivity, and systemic “agreement with the professor/academic establishment.” Instead, it encourages all students to offer their views in their own authentic voices. To my delight, students have responded to the R&R invitation vigorously, telling me how much they relish this rare freedom to share their honest reactions to their university work. I don’t always agree with the stated positions, of course, but in the fairly quick personal responses I send back to each submission, there are always openings for me to focus positively on some part of the R&R. These submissions are incredibly helpful to my teaching because they operate as a real-time window on a course, immediately revealing what students are perceiving as strengths or weaknesses and so allowing me to make speedy adjustments instead of finding these things out only by reading the end-of-course evaluations, when it’s too late to do anything.

I never know what is going to come in as a Rant or a Rave. Most of the time, as one might expect, I get helpful information about what students are liking or disliking and why, such as comments about the frustrating lack of action in Virginia Woolf or about the tedium of grammar expectations, as in this witty example: “Dear Professor Austin, Picture a packed circus tent, with clowns and popcorn and a center ring. Now picture an exuberant ringmaster coaxing a grizzly, reluctant, old tiger through a flaming ring. I am the tiger and you are the ring master. Now you understand how I feel about writing essays. I am sorry but I can not work up the excitement you have for writing. I think that my problem is with the editing process because I would rather rip off a nail than edit.” All R&R submissions allow me to respond to individual complaints or reinforce noted areas of interest, but they also help me slant the collective classroom discussions towards addressing the various issues raised. Even more importantly, as students repeatedly mention in post-course evaluation notes, the R&R strategy contributes to an atmosphere of mutual trust. For example, after a course ended one student who had struggled with the academic demands for objective scholarship in his essays expressed the importance of the R&R submissions for him, calling them an “ingenious” strategy because they had kept him feeling “validated” as both an intellectual and an individual.

However, sometimes the students speak of aspects so powerfully personal that I am in awe of their willingness to share such a conversation with me, and what they then say etches itself onto my consciousness with a forcefulness that ensures the awareness of their comments will forever be incorporated into my future teaching. The following excerpts from just 3 representative examples demonstrate the power that the private R&R conversations can carry and suggest the impact these private conversations can have on other students in present and future classrooms.

The first excerpt is from a response to Pat Barker’s 2003 novel Double Vision, which is about a modern war correspondent back home in the peaceful English countryside but still coping with PTSD after years of reporting on violence in the Balkans, Rwanda, Afghanistan, and 9/11 in New York. My young student opened my eyes to a recognition of the nature of some of the forces that have shaped their formative years as she commented, “I loved Double Vision. . . . Interestingly, the class discussions have really opened my eyes about myself. It really speaks to the way Barker captured the feel of the post-9/11 world, that I can say I learned a lot about myself by looking at her book. I am a child of the post-9/11 world. I was only 11 years old in 2001. I can barely remember a world before fear of attack and terrorism, and because of when things changed,
that fear just seems like part of growing up. Between terrorism, and war, and recession, I have been traumatized a bit myself, and I say that because when we first started talking about the menace of the book (the aggressive trees, Stephen's fear of windows [blowing out], etc) I was shocked. It wasn't that I hadn't noticed these things, I just had not seen the book as menacing. I thought it just followed a few people's lives in a small town. It did not seem overly dark or menacing to me. It seemed normal . . . ."

The second excerpt is from a response to Ian McEwan's 1987 novel *Enduring Love*, which reveals the lasting consequences for bystanders who witness the horror of a hot-air balloon accident. This student stunned me with her linking of our novel to events in her own life. “I have been debating sending this particular rave because I am not very good at expressing my personal emotions in any type of public setting, but I have decided that this book deserves some praise. The beginning scene which describes the death of Logan is extremely realistic. The emotions of Joe and his difficulty believing what he is seeing really hit me. The passage where he watches Logan slide down the rope right before falling to his death and then the image of Logan sitting on the ground when Joe goes down to the body are traumatizing but so incredibly well written. I honestly read this section and then was immediately sick to my stomach.

Last April I happened to be driving across the Westmorland Street Bridge when a man (I hesitate to say man since he was a year younger than me) two cars ahead of me pulled over his car, got out, climbed up on the rail and jumped off. It happened in a matter of seconds but it felt like a lifetime. I am telling you all this because of my reaction to it.

He had on a loose white t-shirt and it was an extremely windy day. When he jumped the wind caught his shirt and it billowed out behind him like a parachute. That image is forever scorched in my memory. Even though I watched him climb up on that rail and jump off my mind refused to believe what I had seen. For a limited blissful moment I had myself convinced that it was a garbage bag which had blown off the back of a truck.

When Joe believes that Logan must be okay. I understood completely. His mind was protecting him as mine had. I haven't really talked to many people about this incident because it has dramatically changed a lot of my views on the world but this book has put me back into the situation and forced me to deal with it.

. . . . I know this sounds a bit like a rant but in reality this book has helped me quite a bit. It has given me the chance to cry and talk about this situation which I had tried to force from my mind. . . . . I just wanted to explain what this book has done for me and to thank you for adding this book into the syllabus.”

The third excerpt comes from a class in which one student had offered lengthy comments on a heroic, closeted gay character in Louis de Bernières' 1994 novel *Captain Corelli's Mandolin*, which is set on a Greek island occupied by German and Italian troops during World War II. Even though the context made clear that the remarks were intended to be gay-positive on a broad scale, the comments were grounded in a rigidly theoretical, critical approach to the idealism in the portrayal, so I tried, repeatedly, to gently push the student to reflect upon the way that theorization can sometimes seem to deny the physical realities of lived human experience. The student just did not see the point I was making, so, to avoid haranguing him, I eventually desisted. However, the following R&R submission made me realize that I should have pushed harder, because another student had been listening in growing frustration and anger: "on a more personal note . . . [the] discussion of Carlos portraying a "good homosexual" and his critic of it nearly induced me to respond emotionally . . . . I've had to sit quietly and respectively in order to hear that a gay character is depicted "too positively" . . . . It
upsets me for two reasons, firstly there does not seem to be any problem with ultra-positive heterosexual characters (aside from a dislike of humanism). I found Bernieres’ Carlos to be a welcome relief from prejudices of the past in that it shows a homosexual character that is displayed favorably instead of a typical rendering of them as deviants.

This reason feeds into my second one; I am gay - which I make no attempts to hide but try to not let it affect my academic responses because I would rather be an English student first in my class work. This does however occasionally leave me vulnerable to taking criticism of homosexuality personally. When a presentation is based on the premise of comparing a homosexual character who is too good with Sartre’s Jean Genet’s career commitment to deviant/degenerate behaviour, where, somehow Genet comes off as being the preferred template - I found that a little hard to swallow. I feel like [it] could have been taken by other people as something less academic and potentially judgmental of positive depictions of or a denial of homosexuality within the text. . . . We are all allowed our personal opinions on the subject but I just wanted to share my point of view with you privately in this rant rather than in class. Rest assured I’m not upset, nor do I expect anything to come of this communication to you but I felt that if, in the future, my feelings on this subject can aide in any future classes or conflicts on the subject then that is satisfaction enough for me.”

In all of these cases the R&R submissions, although merely a routine part of course participation requirements, provided information that prompted me to initiate an expanded conversation with students to make sure that they were all right and that they knew what professional resources were available for them at the university should they wish. As well, each submission alerted me to what was going on through the minds of some of my students during classroom discussion of course material, and that information led me to think about how I might be able to better address these and similar concerns in future classes.

Everything I do as part of my teaching stems from the fact that I care, deeply, about my students as the unique individuals that they are, and I want them present in my classroom, not just physically, but also intellectually and emotionally. I care about their futures, and I want what we do in our courses to help them face whatever challenges life brings. As is clear from the preceding discussion of various types of academic conversations, over the course of my career I have made “conversations” of various kinds a central pedagogical tool in my university courses.

And it seems to me, from their responses on course evaluations, that students genuinely appreciate the invitation to participate in their own learning. Repeated comments like the following representative examples inspire me to continue trying to find new ways to teach through conversations. “I liked the schedule (what to expect) and the designated speakers. It gave the class a definite chance to participate. I also liked the rants /raves. It was a chance for me to tell her what I truly thought.” “Designated speaker really works. For people who are usually shy, they have time to prepare & practice. Takes off a lot of stress.” “I felt very free to participate in class (designated speaker inspired this.)” “[S]he is very welcome and open, makes class comfortable for everyone.” Attendance is “Better, because in most other courses, I can make up the missed material on my own, but the discussions in this class are very important to understanding the material.” And finally, this affirms why all the efforts are worth it: “It is great to know Prof. Austin is on the student’s side.”

Diana Austin

Dr. Diana Austin is a professor of English and 3M National Teaching Fellow at UNB Fredericton. Her main academic field is 20th-21st c. British Literature, with a special interest in World War I literature, writing by women, and contemporary fiction and poetry.
I designed this proofing/marking guide to indicate common areas of essay strength and weakness; sample elements to consider are offered below, but many more may be involved.

**THOUGHT**
- **thesis** ✓ explicit, immediate, challenging ☹ lacking? ☹ unclear? ☹ bland?
- **analysis** ✓ complex, logical, clear chain of reasoning ☹ mere plot summary or mere description? ☹ unconvincing generalization?
- **evidence** ✓ supporting quotations & explanations ☹ mere assertion?
- **specifics** ✓ supporting, relevant details ☹ lacking? ☹ stated without analysis?
- **originality** ✓ unusual angle, unexpected importance ☹ obvious? ☹ unsupported?

**ORGANIZATION**
- **thesis** ✓ clearly frames overall argument and each paragraph ☹ not explicitly in control of every section? ☹ becomes unclear or shifts?
- **introduction** ✓ establishes thesis, background, and order of ideas ☹ too long? ☹ too short? ☹ too many strands?
- **body** ✓ each paragraph develops topic/thesis and every sentence contributes ☹ ideas not clearly related to topic/thesis? ☹ order differs from introduction?
- **topic sentences** ✓ start each paragraph by identifying new angle and link to thesis ☹ missing? ☹ unclear about relevance to thesis
- **conclusion** ✓ rounds off opening argument ☹ confuses by dragging in new ideas?

**GRAMMAR**
- **diction** ✓ precision, tone, power ☹ vague? ☹ unidiomatic? ☹ colloquial? ☹ inaccurate?
- **apostrophes** ✓ possession ☹ plurals? pronouns?
- **parallelism** ✓ parallel grammatical structures as required ☹ mixed structures?
- **agreement/reference** ✓ subjects & verbs, pronouns & antecedents ☹ mismatching?
- **formality** ✓ appropriate diction & tone ☹ contractions? ☹ slang?
- **sentence structures** ✓ standard ☹ fragments? ☹ comma splices? ☹ fusings?
- **modifiers** ✓ logical ☹ misplaced? ☹ dangling?
- **verb tense** ✓ present for literary analysis ☹ mixing present/past tenses illogically?
- **mechanics** ✓ conventions for quotations, italics, capitals, abbreviations, numbers, spelling

**STYLE**
- **wordiness** ✓ concise diction/thought/constructions ☹ roundabout/formulaic constructions?
- **repetition** ✓ rare & as rhetorical device ☹ words? ideas? sentence openings?
- **coordination/subordination/transitions** ✓ to link ideas & help argument & rhythm flow ☹ confused/abrupt--too little? ☹ confused/tangled--too much?
- **blandness** ✓ vivid, concrete diction & varied constructions ☹ clichés? ☹ colourless?
CONTINUING THE CONVERSATION WITH MASTERINGCHEMISTRY™

Katherine Darvesh, Mount Saint Vincent University

ABSTRACT

When teaching general chemistry, it is vitally important to keep students engaged with the subject outside of the classroom. The traditional way to do this is either by assigning problem sets to be handed in or by holding quizzes based on assigned work. We have recently been using MasteringChemistry™, an adaptive-learning online homework system available from Pearson Education. We are using this system in conjunction with a novel set of student lecture books authored by members of the Dalhousie University Chemistry department as part of the Concepts in Chemistry program. In this paper, I will describe how we are using these tools to support student learning. I outline some of the challenges we encountered, as well as how we addressed those challenges. First and foremost, it is important to realize that these tools work best together when the instructor works with them in such a way so as to continue the learning conversation. Assigning the students a set of problems from MasteringChemistry™ begins the conversation on several levels. Students may seek help as they struggle to complete their assignment. Those who start the assignment early in the week can provide valuable feedback, which can be shared with their classmates as part of an ongoing feedback loop. I discuss various means by which the conversation can be continued outside of the classroom.

Introduction

Teaching general chemistry (or any survey course, for that matter), comes with its own unique set of challenges. The introductory course often follows a set curriculum, and has been likened from the student’s perspective to “drinking from a fire hydrant”. It is important to cover certain key concepts, not just for preparation for subsequent courses, but also for transferability of the credit. More detail on these key concepts can be found in an article describing the Anchoring Concepts Content Map for general chemistry (Holme and Murphy, 2012). Many, if not most of the students in a general chemistry class are taking the course as part of their requirements for another program (nursing, nutrition, engineering, etc.). This places additional demands on the curriculum. Finally, for some learners, general chemistry is the last chemistry course they will take; so one hopes that they will come out of this course with some sense of the role that chemistry plays in their day-to-day lives, as well as the role it plays in some of the challenges and solutions of the modern era.

Concepts in Chemistry, along with its textbook and ancillary components, was developed at Dalhousie University with a view to addressing some of the challenges described above in a way that fosters student engagement (2010, Alemán-Milán et al., 2012). While this program proved to be successful at Dalhousie, where the authors of the textbook were well positioned to teach the content they developed, the question of transferability arose. Would the textbook facilitate learning for students attending other schools, or would modifications be required? In 2009, we began working with Dalhousie University to answer that question. We use the Concepts in Chemistry textbooks in our general chemistry classes at Mount Saint Vincent University (MSVU). We have found that a key component of the utility of the student lecture books is their layout, which includes a partial set of notes on the left side of the page, and on the right a blank space sufficiently large for students to be able to write their own notes.
taken in class. This aspect of the book is one of the key elements of Universal Instructional Design (Bryson, 2003), a model which shifts the mindset from accommodation of diverse learners and learning disabilities, to the notion that improved course design provides benefits for all learners. Sometimes in courses, a student with a documented learning disability may have difficulty with taking class notes, so a notetaker is provided as part of their accommodation. The Concepts in Chemistry textbook obviates the need for downloading, printing, and organizing PowerPoint slides, and also eliminates excessive notetaking, which helps all students. Instead, the notes taken can focus on the key principles, and on problem-solving. The instructor can display a PowerPoint with partial content from the book, and flesh that out through the use of a digital pen tablet or digital notebook with a pen feature, using the “ink” annotation feature of PowerPoint. The use of digital ink to annotate PowerPoint lectures has been reported to be particularly useful for Chemistry instruction (Johnson, 2008). When an instructor writes some of the notes freehand in class, students can observe chemical structures being drawn out in real time, and they can work on the printed exercises from the textbook as the instructor writes them out. This is far more engaging than merely watching PowerPoint slides.

Critical to any successful learning in general chemistry is some form of weekly activity designed to consolidate and master what has been learned, as mentioned above. There are various online homework systems available for general chemistry, including the one associated with Concepts in Chemistry. The homework system we used prior to adoption of Concepts in Chemistry, and which we are using currently with the Concepts textbook, is MasteringChemistry™, an adaptive-learning online homework system available from Pearson Education. MasteringChemistry™ has been available for some time now (MasteringPhysics™ was launched in 2003, and MasteringChemistry™ followed suit in 2006.) Some of the homework questions one can assign from MasteringChemistry™ are generic (i.e., not associated with any particular textbook), but others are end-of-chapter problems from textbooks. The version of MasteringChemistry™ used at MSU has end-of-chapter problems from Chemistry: A Molecular Approach (Tro, 2011). From the many questions and problems available, we set a weekly assignment to be done outside of class either directly for credit, or for practice in preparation for a short quiz based on those problems. Given the features, the content, the ability to personalize and select desired content, and the support, MasteringChemistry™ is a vehicle for a different type of conversation from the type that usually occurs in the classroom.

I will now describe some strategies for working with MasteringChemistry™ to meet the challenge of making the transition between assignment software and textbook more seamless, as well as to improve student engagement.

The Comments feature

Some of the problems in MasteringChemistry™ have hints that students can click on to assist them if they are facing difficulty with a particular problem. In addition, the instructor can give hints of his or her own, using the comments feature. This can be quite important when using a textbook that is not directly linked to the assignment questions. There may be slight differences in terminology between the two. For example, what is referred to as “VSEPR shape” in Concepts in Chemistry, is known as “electron-domain geometry” in MasteringChemistry™. It is good for students to know both of these terms, but confusing if a question arises with the new term when they haven’t used it before. Just above the question, I post a comment to let the class know that electron domain geometry refers to VSEPR shape. There may also be slight differences in the values for constants, depending on source.
As these numbers must be used in various calculations, if students use the textbook value, they may get an “incorrect” answer. This can actually become quite a useful conversation, because it gets the class thinking about where these constants actually come from in the first place. Ideally, the instructor anticipates the problem and suggests which value to use, but at the very least, he or she needs to be responsive when students bring the discrepancy to his or her attention. I recommend that the discrepancy be pointed out in a comment posted alongside the question itself.

Specifics of assignment

It may seem self-evident, but the assignment should relate to the material recently covered; otherwise, the only “conversation” that is going to take place is the one between the professor and a very bewildered student. It is all too tempting for the instructor to simply select questions based on their title or on the first few words of the problem, seeing that they relate to the topic covered, but delving deeper into a problem might indicate that students may not be ready for that particular question. For example, asking students to do a calculation of molarity, using the formula

\[
\text{molarity} = \frac{\text{moles of solute}}{\text{volume of solution in litres}}
\]

when given moles and volume is more straightforward than asking them to calculate the volume of solution required, given moles and density, because the first calculation does not require any rearrangement of the formula provided. The previous example is fairly trivial. Another example might be the situation where students must use the equilibrium constant to determine a partial pressure at equilibrium. It would be best to start with an example where the student doesn’t need to solve the roots of a quadratic equation. There are numerous scenarios in Chemistry where a question may not be the best question to start with, either for mathematical reasons, or because the question refers to a situation that is subtly different from what is usually expected (e.g., asking for the atomic electron configuration of an element that is one of the exceptions to the usual rules). I recommend starting with a few of the more straightforward problems on the topic for a good warm-up, and then working your way towards some that are a bit of a stretch. The comments feature can be helpful once again, because you can help to make a connection with the textbook by referring to a particular page or topic in the textbook, or by referring to online worked examples provided as part of the Concepts in Chemistry program. That way, students can go directly to the material in the textbook that can help them with the assignment.

Various conversations

The technology can be a means to work closely with your student, because if they come to you with difficulties, you can go into the software and see where the problems lie. Imagine that a student contacts you because they are having difficulty with writing out the net ionic equation for a chemical reaction and can’t get the answer right. With instructor privileges, you can go into their screen, and see their attempts. Perhaps what they thought was a problem with the homework technology turns out to be a difficulty they were having understanding what must be done when writing out a net ionic equation. In the email or face-to-face conversation you have with the student, you can point this out, and even check that they have understood in subsequent assignment questions. The ability to enter a student’s assignment to see their attempts can also help to unearth questions where discrepancies arise in values of constants between text and homework software. As described under the comments feature, the instructor may add a
general comment to the assignment if it would be helpful to the class.

Conversations about terminology and general comments added based on student feedback can be seen as a feedback loop, with the instructor setting the assignment, the students attempting it, then contacting the instructor with questions (Figure 1). The instructor, in turn, based on feedback, adds a comment to the assignment for all to see. Adding a comment after some students have begun the assignment raises the possibility of student concerns around fairness, since the students who completed the assignment early did not receive the benefit of the added comments. I have not found this to be a problem, because very little point value is lost in an unsuccessful attempt, and I always encourage students to seek help after using up several of their tries, and before much credit is lost. It is possible to create a learning climate where everybody feels they benefit from the dialog that takes place.

Another type of communication may be a one-on-one question dealing with administrative issues. Let’s suppose a student needs to miss an in-class quiz for a valid reason such as a student athletic meet. What was to have been a practice assignment for the class can be used to assign a quiz grade. What about students who require extra time for quizzes, under the terms of accommodation? The instructor might want to consider giving credit to the student for a practice assignment in lieu of requiring them to write the quiz. A possible concern about this would be the possibility that students would have an unfair advantage over their classmates. This may be a concern, but I still believe it to be a better alternative than simply waiving the quiz. By still requiring some sort of activity, students receive the message that they are still responsible for learning the material somehow. It is possible to set a time limit on an assignment to better resemble the quiz environment.

When students are working away at their assignments, combining what they have read from Concepts in Chemistry with their MasteringChemistry™ activities, there may be quite a few conversations with the instructor, leading to a large volume of email. There are two possible ways to cope if the number of conversations becomes excessive. One possible solution is to delegate the conversations to a teaching assistant. Another way is to set up a discussion forum on the course management site. This can even be formalized by assigning a course grade to the help students extend to their classmates through the online discussion forum (Vaughan, 2011). Specifically, a discussion forum on the assignment can be established on the course management website. Students can post questions to the discussion forum. When a classmate posts an appropriately helpful suggestion or comment to the discussion forum, this can be noted by the instructor, who assigns some portion of the course grade to these posts.

“What are we missing when we place a website between us and the students rather than directly speaking with them?” was one of the questions posed on the discussion wall of the conference. The comments posted often referred to the value of having both types of conversations (online and face-to-face). In the context of our general chemistry class, we have both types of conversations going on: students go to class and see their instructor in a

Figure 1 Feedback loop for an online assignment
traditional classroom setting, but outside of class, the technology supports a different kind of conversation, aided by the tools provided. There is no question of one method being better than another, because the two methods are working in concert to foster engagement.

Future work

In the MasteringChemistry™ platform, questions can be selected from the very extensive question bank provided. In addition, there is the possibility of editing existing questions or of generating new ones. These could provide an even more explicit link between the textbook material and the assignments. Developing questions in the MasteringChemistry™ platform based on the Concepts in Chemistry text is something I would like to attempt in the future.

Conclusion

In conclusion, Concepts in Chemistry and MasteringChemistry™ can be used together effectively, as long as they are not merely seen as tools for the professor’s convenience, but instead as vehicles for enhanced student learning. The time traditionally spent by the instructor on course preparation shifts away from activities such as the photocopying of handouts or writing absolutely everything out on the blackboard to working with the tools available to personalize the experience for students, so that learning is aided by many different types of communication throughout the course. This gives students the opportunity to devote more time to learning and problem solving. This shift is taking place in many courses, as we strive to develop better ways to foster student engagement.

Acknowledgments

Thank you to my general chemistry students for their patience and enthusiasm, as well as the Chemical Education division of the Chemical Institute of Canada and the MSVU Centre for Teaching and Learning for many ideas in support of active learning. Thank you to the referees for helpful comments. Finally, thank you to the Concepts in Chemistry team and the staff of Pearson Education for their support of our efforts to combine these tools effectively.

References


Vaughan, N. (2011). Blended Learning: New Opportunities for Face-to-Face and Distance Teaching and Learning, the President’s Visiting Lecture Series on Teaching and Learning, held at Mount Saint Vincent University, March 11, 2011.
Katherine Darvesh

Dr. Katherine Darvesh is an Associate Professor in the Department of Chemistry and Physics at Mount Saint Vincent University. For some years now she has been involved with the Chemical Education division of the Canadian Society for Chemistry, serving in various capacities, including Chair. Dr. Darvesh’s research interests include computational studies that could have a positive impact on the search for new drugs to treat Alzheimer’s disease, as well as Chemical Education. She was recognized with the MSVU Alumnae Award for Teaching Excellence in 2008.
A TALE OF TWO (DISTANCE) COURSES

Michelle Eskritt, Mount Saint Vincent University
Tanya Crawford, Mount Saint Vincent University

ABSTRACT

We would like to have a conversation about the (re)design of two psychology (distance education) courses, PSYC 1110, Introduction to Psychology as a Natural Science and PSYC 3310, Cognitive Development. Grades and retention rates of students enrolled in previous psychology distance courses were lower compared to the oncampus sections of the courses. Students expressed dissatisfaction and frustration with the courses’ format. The main goal in redesigning the courses was to ensure that the quality of the student learning experiences and achievement of the learning outcomes experienced by the distance and oncampus students was similar. We hoped to accomplish this goal by increasing student engagement and providing more structure in the course to help keep students ‘on track’. The course designs had a number of features including synchronous and asynchronous interactions, podcasts, online resources, lab assignments, and weekly quizzes. We discuss the rationale for the different course components and how the two courses differed from one another, one being a first-year and the other a third-year course. Not only did grades and retention rates improve for both courses, but feedback from students was overwhelmingly positive. This exercise had the additional (unplanned) benefit of instructional design changes that improved the oncampus courses.

Introduction

We would like to describe the design of two psychology (distance education) courses: PSYC 1110, Introduction to Psychology as a Natural Science and PSYC 3310, Cognitive Development. Although the occasional psychology major enrolls in the third year course, the majority of students enrolled in the Cognitive Development course are Child and Youth Study majors because it is a required course for their degree. Similarly, although psychology majors enroll in Introductory Psychology, this course is a popular elective and degree requirement for other disciplines; therefore, the majority of the enrolled students are not psychology majors.

The previous format of psychology distance courses at MSVU has been taped (recorded/tv broadcast) lectures. The instructor teaches a course to an oncampus class which is videotaped. For the distance course, students watched DVDs or streaming videos of the lectures. Student learning was assessed typically by multiple choice exams and the occasional assignment. Both student grades and retention levels were consistently lower in the distance sections compared to oncampus sections. Distance sections, particularly for Introductory Psychology, tended to steadily lose students over the semester.

In informal conversations with students about their experience with the taped lecture style, students commented they have problems with the lack of structure in the course. It is all too easy, even for ‘good’ students, to not watch the lectures or do the readings until immediately before an exam. As one student stated, without regular lectures to attend, it is easy to forget you are taking a course. However, the flexibility of watching the lectures at a time convenient for the individual student was seen as a benefit for this style of distance course. Students will sometimes choose to take a distance course even if they can attend the course oncampus. They do this, not expecting to enjoy the course as much, but sacrificing...
some of their enjoyment of course content for
distractibility. Students do not enjoy taped lecture
style distance courses because they do not find
them as engaging as oncampus classes. Students dislike not being able to interact with
their professor during the class. They also miss
taking the course with the other students and
the informal interaction that occurs with other
students during an oncampus course (Boling et
al., 2012; McKeon, 2012). Students feel isolated
and alone while taking a distance course. It is
not only pleasant and more motivating to
interact with others in class, but students also
learn by interacting with the instructor and the
other students (Hardy & Bower, 2004).

Therefore, the goal in designing these
two distance courses was to ensure the quality
of learning experienced by the distance
students would be similar to that of a student
enrolled in the same course oncampus. We
hoped to improve the learning experienced by
distance students by: 1) increasing the amount
of structure in the course, 2) increasing
students’ engagement with the content, and 3)
providing structured opportunities for
interaction with the instructor and among the
students in the class.

**Course Structure**

LaMonica (2001) found that for both instructors
and students, the most important element of a
successful online course was the organization of
the course. To use technology effectively in
distance courses, instructors need to focus less
on conveying content and instead act as a
facilitator of learning (Hardy & Bower, 2004;
Smolin & Lawless, 2003). This requires “a shift
from a teaching to a learning paradigm” (Boling
et al., 2012, p. 118). If students are more active
in their learning, they will not only be more
engaged in the course content, but active
learning reduces the need for taped lectures.
Students can learn more of the content on their
own. The challenge for us was to reduce the
amount of content that needed to be learned to
provide students more time to work with and
critically think about what they were learning.
This meant reflecting on what content was
necessary for each course and what might be
considered ‘extra’. The fact that the majority of
students enrolling in both courses will not be
psychology majors added an additional design
challenge. What did we want the students to
know and understand about introductory
psychology and cognitive development by the
end of each course?

This design consideration was less of a
challenge for the third year Cognitive
Development course because by the time
students take this course they have already
taken Introductory Psychology and a full year of
Developmental Psychology. They should have
some basic knowledge about the development
of thinking. The objectives of the course place
less emphasis on learning new content and
focus more on having students critically reflect
on what they know about the different
concepts or theories, and learn to apply these
ideas.

Introductory Psychology, however, was
completely different. As a first year survey
course, more content is expected to be taught
in comparison to the third year course. Also,
introductory psychology textbooks have been
gradually increasing in volume over time—it
feels like every significant idea or study in
psychology is added to the textbook, which has
been described as ‘encyclopedic’ (Stoloff, 2010).
Further, even in the best Introductory
Psychology textbooks, the writing is very dense.
Students need help understanding the content
of the textbooks because there is so much
content that is so complex, which is hard to do
without lecturing. Eliminating material is
difficult because ideas or studies that are
considered essential are often intertwined with
interesting, but non-essential content.

We decided that if we did not want a
series of taped lectures for Introductory
Psychology, and given the course audience of
typically first year students, we needed to
eliminate the traditional Introductory
Psychology textbook. We decided on the trade
book by Chris Frith (2007) written for individuals from the general public who are interested in learning about psychology. He describes how psychologists view the way the mind works to construct our understanding of reality. In doing so, he covers all of the topics in the first half of Introductory Psychology, with the exception of memory, which was easily remedied by supplementing with a chapter from another trade book (Chabris & Simons, 2009). Firth’s book is significantly shorter (and cheaper!) than the conventional textbook. It is also an easier and more entertaining book to read. Therefore, it was decided to use a shorter book for both courses to free up students’ time so they could engage in other activities besides reading the textbook and listening to lectures explaining the textbook.

Both courses were structured by dividing course content into modules based on different themes. The themes derived from the content of the chapters in the course textbook, but unlike many courses, the course delivery was not determined by the content and organization of the textbook. Students engaged in a number of different activities for each module to learn and critically think about the content related to the module’s theme, and the order of activities varied from module to module. Table 1 lists the activities included in each module.

The course notes were used to guide the students through each module. They outlined what students needed to do and in what order. Importantly, they also explained why so that students understood how the different elements of each module fit together. For the Cognitive Development course, the course notes were provided as a podcast (i.e., an audio file) which ranged in length from 3 to 15 minutes and included more of the instructor’s reflections about the content. This was the extent of the “lecturing” for the course (outside of online talks from sites like TED.com). The course notes for Introductory Psychology were provided as a Word document usually no more than one page in length.

As students in Introductory Psychology were expected to need more support and learn more content, two activities were included in the modules for this course that were not present in the Cognitive Development course. One objective of Introductory Psychology is for students to learn the terminology of the field (i.e., all the bolded terms in the standard introductory textbook), so for the Words to Know activity, students searched for words in the Oxford Dictionary of Psychology (Coleman, 2009) that were applicable to the module’s theme, but were not as well defined or highlighted in the module’s other activities. Also, we could not entirely escape from the taped lectures, so each module had a vodcast (i.e., videotaped lecture) that ranged in length from 15 to 30 minutes. These lectures contained some of the essential information that is taught in the first half of Introductory Psychology but was either not addressed or not addressed in enough detail in Frith’s book.

Modules also included at least one link to a website, online talk, and/or educational video for students to view. To provide students with the opportunity to interact with other students, each module included a discussion forum and a Blackboard Collaborate session (i.e., a virtual real-time classroom platform), detailed later. Both courses had a number of assignments, sometimes done in groups, and these frequently spanned across modules so that students began them in one module, and then submitted them in a later module. When
students came to the end of the module, they completed an online quiz of multiple choice questions which assessed students’ factual understanding of the content. Take home exams, which were not part of any one module, assessed critical thinking of the material. Students were provided links to all the necessary material for each module on Moodle, the online course management system used by MSVU. Figure 1 provides an example of what Introductory Psychology students saw for their second module.

<table>
<thead>
<tr>
<th>30 April - 5 May</th>
<th>7 May - 10 May</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module 2: The Brain</strong></td>
<td><strong>Module 3: Memory</strong></td>
</tr>
<tr>
<td>Course notes for Module 2</td>
<td>Before doing anything for this module, watch the car accident video clip (link is available below) and then answer the questions associated with it. We will be discussing the clip during the Collaborate session so please watch the clip and answer the questions before then. Please don’t cheat and watch it more than once!</td>
</tr>
<tr>
<td>Words to know for Module 2</td>
<td>Course notes for Module 3</td>
</tr>
<tr>
<td>PSYC 1100 Video 03: The Building Blocks of the Nervous System (23 mins, 91 sec)</td>
<td>Car accident video</td>
</tr>
<tr>
<td>Building Blocks of Nervous System podcast slides</td>
<td>In this module, we will be covering information about memory.</td>
</tr>
<tr>
<td>PSYC 1100 Video 04: Your Brain on drugs (cocaine specifically)</td>
<td>Lecture 3.1: Memory - The Nature of Memory (Collaborate)</td>
</tr>
<tr>
<td>PSYC 1100 Video 05: Identify Damaged Brain Structures Activity</td>
<td></td>
</tr>
<tr>
<td>Module 2 quiz</td>
<td>Module 3 quiz</td>
</tr>
</tbody>
</table>

Figure 1

Each course has now been offered once: Cognitive Development in the Winter 2012 semester, and the first half of Introductory Psychology was taught in the Spring 2012 session. We received a lot of informal, positive feedback from students about the courses and decided, rather last minute, to formally survey the students about their perceptions of the distance course they took. Because we decided to survey the students after the end of the semester, by the time we had obtained ethics clearance we were into the summer before we could invite the students to complete an online survey. We received 6 responses out of a possible 28 students across both courses. We hope to collect more data from students taking the Introductory Psychology again in the Winter 2013 semester. The responses we received were similar to the informal feedback we had already obtained. For the most part, students were very positive about the course. In terms of the course structure, students commented:

“I found the course design facilitated ease of learning. The interaction between textbook readings and weekly student responses/quizzes kept me on my toes, and allowed for a more practicale understanding of the course material.” (cognitive development student)

“Loved it but felt there was too much reading involved. More videos would have been better.” (introductory psychology student)

“This was my first university course so I don’t have anything to compare it to but for me I loved how the course was laid out, I knew exactly what to expect and when to do each item. I am a sequential person so this worked really well for me and especially where it was my first course there weren’t any surprises. I really liked how each module flowed into the next, it all made sense to me and I thought was well thought out.” (introductory psychology student)

“The course was designed GREAT!!! It was super easy to keep up with and I loved that there were modules of things to do for that week. Often times in other courses that I have taken I end up behind because there is no structure to the online version of the course but this one was GREAT!!!! I feel that I learned a lot by reading through the textbook and doing the online quizzes and I also felt that the labs were an excellent addition to the class. I liked that there was guidance through Collaborate for the labs as
well! Great design!” (cognitive development student)

In describing the course to others, a common comment is that the younger generation would really enjoy the course structure. We were pleased therefore that all of our respondents were over the age of 20, three being in the 40 to 49 year age range. Although this course structure may resonate well with 17- and 18-year-olds that are the usual age of Introductory Psychology students, the positive feedback was not from that age group.

We had hoped that providing more structure to the course would help student retention. For the Introductory Psychology class, we lost 1 student out of the 10 students that initially enrolled. As a means of comparison, for the distance section taught in the previous spring session, we lost 6 students out of the 19 enrolled. For the Cognitive Development class, we lost only 1 student out of the 19.

Student Engagement

One activity that was included in each module to increase student engagement with other students in the course was the online, asynchronous discussion forum. For the forums, students watched an online talk or read an article or book chapter. The topics for the forums were specifically chosen because they were either controversial or were topics that students find particularly interesting. Students needed to post a comment on the talk/reading that demonstrated critical thinking and post a response to another student’s post. Students who demonstrated critical thinking in their post received 1% towards their final grade for that forum. Performance on the discussion forums contributed between 5 to 10% of the student’s final mark. Rather than respond to each individual post, at the end of a particular forum, the instructor wrote a response about the entire forum, pulling together themes that arose from the various student postings, and relating what was said to course content or providing additional information or clarification.

“I enjoy the challenge of writing up the discussions, it gets me thinking about what I think, if you know what I mean.” (cognitive development student)

Students in general tend to enjoy participating in the discussion forums, but we think that might be more so with the distance courses. Zukas (1999) found that students in online courses enjoy discussing topics with other students even more than with their instructor. This may be due to the lack of informal interaction with classmates in distance courses. In the discussion forums, students usually wrote about a half page single spaced for their posts; however, it is not unusual for the comments to be a page or more. The Cognitive Development students also needed to find one article in the research literature related to their ideas in their post, and it was frequently the case that they would list more than the required one reference. They did so, but the extra work did not affect their grade for the forum; their performance was assessed as a pass or fail.

The other means of enhancing student engagement was the use of Blackboard Collaborate, an online software platform that allows for a virtual, real-time classroom experience. Although video is possible, the main means of interaction is through the use of a microphone or by texting. The platform includes a whiteboard where the instructor or students can write, draw, or paste content. It is also possible to web tour the Internet, or instructors can share whatever software applications they may have on their computer, even if the students do not have the same software on their computers. The instructor can also upload and share PowerPoint slides; however, lecturing “on Collaborate” does not work as well as in person because students are listening to a voice lecturing and do not have a person to watch. The Collaborate sessions were not as well developed for the Cognitive
Development class. Collaborate was used in part to ensure that the students were not having problems navigating through the course; however, they were predominately employed to help students with their lab assignments which involved coding video clips of children engaging in a replication of classic studies in psychology (i.e., Developmental Science labs).

For Introductory Psychology, the Collaborate sessions also helped students with their assignments, but the main use engaged students in an activity to reinforce what they learned in the module. For example, students worked in groups to design a study as a review of research methods, and watched television advertisements on YouTube to identify how companies use classical conditioning in advertising. There were two Collaborate sessions for each of the first two modules to provide the students with more support at the beginning of the course, and then one Collaborate session for each following module.

In the Collaborate sessions, students predominately used texting to communicate with the entire class or with each other (in group work). The texting tool requires brevity and conciseness since one needs to communicate in only a few sentences. Sometimes students used the microphone to talk because texting did not enable them to express more complex ideas. Although it would be helpful to find ways to have students use the microphone more, we were hesitant to force students into this mode. Student engagement in the Collaborate sessions was high. All students communicated at least once during the session presumably because texting was less intimidating. Further, texting takes time, so while an instructor may feel impatient waiting to see what a student is texting (Collaborate indicates when someone is typing, but the full message cannot be read until the text is sent), it does give students time to reflect on what they think. It also allows multiple students to reply at the same time so one or two students cannot monopolize the conversation, which can happen with in-class discussions. Thus while we would like to explore ways of encouraging students to use the microphone more, it would not be to replace the use of texting to communicate.

All of the students who replied to the survey liked the interaction with and learning from other students in the course. All of them enjoyed the discussion forums and 5 out of the 6 liked the Collaborate sessions. The sixth student, who had taken Cognitive Development, made a point of explaining why she did not find the sessions useful: the lab assignments (which were the point of the Collaborate sessions for that particular course) were so well laid out, she did not feel the additional help was necessary, though “I know for a fact that they were to many of the students in the class.”

Conclusion

The feedback we received both informally from students and from the online survey indicates we successfully designed the distance courses to increase structure and level of student engagement. Grades for the two distance courses were not only comparable to the oncampus sections, but they were slightly higher. Some of the student comments included:

“This was one of my favorite courses. I usually do not excel in psychology courses, and it is not because of the content, rather the format, or the way the information is presented. I am a practical learner, and I do best with an interactive learning format, rather than lecture format. I think the way this course was presented allowed me to both learn the material, and also to apply the material in a very practical sense 😊” (cognitive development student)

“The course] really outshone my expectations of a distance course. And I would like to say that for my first course, even though I was stressed with the workload (more self-inflicted than anything) that I really enjoyed the course. I really enjoyed how clearly it was laid out and I really
enjoyed all the life examples our professor used in her explanations. I thought that anchored the learning really well. I also thought she used the adult principles of learning beautifully. I was never bored in this course and always engaged. Thank you for making my first experience a positive one!”

(introductory psychology student)

“Great course!! Best Psych mark I have received thus far at the Mount 😊 I actually talked in length with a few students about my experiences with this course, which is the main reason I took the time to do this survey... 😊”

(cognitive development student)

“This was the best distance course I have taken so far. So interesting and so easy to follow along each week. Thank you so much!!!”

(cognitive development student)

Were we able to meet our goal to ensure that the quality of the learning experienced by the distance students would be similar to that of an oncampus student? There has certainly been much debate as to whether or not this is possible for a distance course (McKeown, 2012). We think the preliminary data of grades and retention levels for each course, and the survey data is certainly suggestive that we met our goal. We do not think that the experience is the same as an oncampus course, but we believe that quality of learning may be the same. In fact, the experience with designing the courses, particularly the Introductory Psychology course, will change how the oncampus courses will be taught: e.g., a “flipped classroom” style, where students do the reading and watch lectures on their own time and then engage in activities during class time (Bergmann, Overmyer, & Wilie, 2012). In essence, the oncampus classes will be more like the Collaborate sessions for the distance sections. Thus, the design of the distance courses had the additional, unexpected benefit of instructional design changes for the oncampus courses.

References


Michelle Eskritt is a member of the Department of Psychology at MSVU. She received her BA in psychology from the University of Windsor and her MA and PhD in Developmental Psychology from Queen’s University. Her research interests lie in the area of cognitive development. Michelle has taught introductory psychology, research methods, and higher level developmental psychology courses. She can be contacted at michelle.eskritt@msvu.ca

Tanya Crawford is the Coordinator of the Teaching and Learning Centre at MSVU. She has been the ‘guide on the side’ to Mount faculty developing 50 new distance courses at the undergraduate, graduate and PhD levels in the Mount’s three faculties. She holds a BSc., Health Education (Dalhousie University), an Advanced Graduate Diploma in Distance Education, specializing in Technology, (AGDDE, T) and an MDE (Master of Distance Education), both from Athabasca University, earned entirely by distance. She can be contacted at tanya.crawford@msvu.ca
TEACHING AS STRUCTURED IMPROVISATION

Martin Kutnowski, St. Thomas University, Fredericton

ABSTRACT

University teaching and learning can succeed only by accepting that teaching is an interactive, real-time skill; it can be planned only to a certain extent, and in that sense teaching potentially includes chaos. Consequently, teaching and learning are akin to a real-time musical or theatrical improvisation. Teaching requires an acute awareness of the one-session-at-a-time, immediate, ephemeral, risky, and sometimes (on a really good day) magical nature of the interaction in the classroom. In order to create this environment, I start by accepting chaos—admittedly, controlled chaos—as a necessary and often most memorable aspect of classroom interaction.

Teaching: Science or Art?

University teaching and learning can succeed only by accepting that teaching is an interactive, real-time skill; it can be planned only to a certain extent, and in that sense teaching potentially includes chaos. Consequently, teaching and learning are akin to a real-time musical or theatrical improvisation. Teaching requires an acute awareness of the one-session-at-a-time, immediate, ephemeral, risky, and sometimes (on a really good day) magical nature of the interaction in the classroom. In order to create this environment, I start by accepting chaos—admittedly, controlled chaos—as a necessary and often most memorable aspect of classroom interaction.

The problem is determining how structured the class experience should be; how much should it be planned and how much should be left to free interaction? How much should we trust the curriculum and the class plan that we created, and how much should we leave to inspiration and chance? I will exaggerate the two poles of the problem, by stating it in stark, black-and-white terms:

Structure vs. Improvisation
Routine vs. Inspiration
Teaching as Science vs. Teaching as Art

Two iconic images provide us with visual metaphors (Figures 1 and 2):

Figure 1 Modern Times

Figure 2 is a painting created in 1881 by French artist Camille Pissarro. It is titled "La Loge de la Place des Vosges" and depicts a young girl in a theatrical setting.

Figure 1 is a captured frame of Charles Chaplin’s “Modern Times,” screened first in 1936. This scene is one of the first sequences of the film, where we see the main character (the Little Tramp) working at a steel factory. With a wrench in each hand, his job is to perform a simple tightening maneuver, over and over, in a long assembly line that cannot ever stop.

Two iconic images provide us with visual metaphors (Figures 1 and 2):

Figure 1 Modern Times

Figure 2 is a painting created in 1881 by French artist Camille Pissarro. It is titled "La Loge de la Place des Vosges" and depicts a young girl in a theatrical setting.

Figure 1 is a captured frame of Charles Chaplin’s “Modern Times,” screened first in 1936. This scene is one of the first sequences of the film, where we see the main character (the Little Tramp) working at a steel factory. With a wrench in each hand, his job is to perform a simple tightening maneuver, over and over, in a long assembly line that cannot ever stop.
Symbolist artist, Gustave Moreau. The title is *Hesiod and His Muse*. Presumably, Hesiod is here learning from her some of the poems he will later recreate.

In the context of this discussion, both of these iconic images can be considered exaggerations, caricatures. Methodical work should not be perceived as alienated torture (as represented in *Modern Times*), nor unfortunately is it possible to just walk in the countryside and let the Muse generously lend us her words to write wonderful poems. As Jeff Daniels, a talented actor and playwright, said: “Writing is hard; writing well is really, really hard.”

Equivalent quotes abound, among them those by Thomas Alva Edison and many other illustrious people: “Genius is one percent inspiration, ninety-nine percent perspiration”; or one of its close variations, also by Edison: “Opportunity is missed by most people because it is dressed in overalls and looks like work”; or “Chance favors only the prepared mind,” by Louis Pasteur. As these and many other similar observations attest, the secret of creation and success lies somewhere between them, owing both to hard work and inspiration (or luck). Yet, in these two images, Chaplin and Moreau provide insight into the virtues and pitfalls of each of these two creative modalities.

In the case of *Modern Times*, the main problem is entropy, which in turn generates boredom and unhappiness. What we see in the image represents any day in the life of this wretched employee. The nuts and bolts will keep coming at him, and they will always need to be tightened. There is no room for innovation, no respite, no pleasure. That is precisely why the tramp’s humanity collides with this premise for existence: he is distracted—first by a fly landing on his face and later by his boss talking to him—and as the tramp fails to keep up, the production of the assembly line comes to a halt. He does not do his job very well, even if he tries, and it is hard not to empathize with him, because the premise is clearly unsustainable. The scripted pantomimic interruptions provide a rhythmic relief as early as in the third minute of the movie. Without these whimsical, slapstick moments, the story would soon be uninteresting, even lifeless. Entropy and its cousins -- boredom and unhappiness -- cannot compete with the vision of humanity offered in *Hesiod and His Muse*. At first, M. Moreau would appear to have the upper hand; the moment of the creative revelation, as it is captured in the painting, is magical, exhilarating. What uneducated peasant could resist the thrill of being instantly and effortlessly transformed into a first-rate poet, led by a young, wise, talented, generous, beautiful woman? I would be very
happy to trade the effort it takes me to write this very article for a meeting with the Muse.

The Mirage of the Muse

Variations of this magical notion can be found in other similar, serendipitous anecdotes, tales that, notwithstanding the grain of truth from which they may have originated, were later embellished for literary or theatrical purposes: be it Archimedes in the bathtub screaming “Eureka” at the moment of discovering the principle of buoyancy; be it the Dove (a representation of God) whispering in Pope Gregory’s ear the correct way to notate liturgical chant (Figure 3); or Sir Isaac Newton discovering the laws of gravity after seeing an apple falling from a tree. In each of these cases, inspiration has been attributed to an external factor or influence, obscuring the hard intellectual labor required to solve these problems. Clearly, in terms of storytelling, it would be less glamorous to say that Newton spent the best part of two decades working out the math required to explain the gravitational laws, or that his *Principia* was based on earlier works by many other scientists.  

![Figure 3 Gregory and the Dove](image-url)

Notwithstanding that magical stories “sell” more, any honest inquiry into the nature of learning and creation must recognize that trusting one’s inspiration (or the Muse) as the sole source for creative work (including teaching) is a mirage. In terms of classroom teaching, constant improvisation—together with its likely cause, poor preparation—leads to bloated redundancy at best, and to incoherent rants at worst. Most teachers, at some point during our student days, experienced at least one professor who wasted time in the classroom, perhaps by digressing on irrelevant aspects of their personal lives, perhaps by failing to assemble a coherent discourse or even failing to reflect and strategize about the topics to explore during the classroom session. Conversely, most of us also experienced the joy of attending classes in which we knew that solid work was going to take place in every session. These were classes where the workflow was explicit, methodical, and relentless, just like an assembly line. Looking back, teachers who experienced such an intensely productive class probably feel grateful about it because it transformed their lives.

As an academic who is also a practical artist—a composer of art music—I hold a firm position in this regard. The creative work I do, including teaching, does not happen thanks to any muse. Instead, I am certain that knowledge, or any work of art, is built by “tightening nuts and bolts,” metaphorically speaking, over days, weeks, months, years, and even decades; indeed, in the case of skills and knowledge, over the span of our entire lives. Almost three decades of making and teaching music have taught me that there is no point in hoping for effortless transformations. To summarize the problem for my own students, I sometimes tell them that if there was a pill I could give them, a special medicine that would instantly help them absorb and learn to play a Mozart sonata at the piano, I would. But, to the best of my knowledge, such a magical potion does not exist.

Instead, I share with them some information about recent relevant discoveries in neuropsychology, which explain how learning happens, from a physiological perspective. Recent research has revealed the importance of
myelin (the famous white matter in the brain) a type of fat that insulates the neural circuits to make the electric signal among synapses stronger. By repeatedly firing signals across specific synapses, more insulation is built; better insulation gradually increases the bandwidth, speed, and accuracy of the signal, in increments measured by several orders of magnitude. And the key notion? Circuits that are fired more often build more fatty tissue; circuits that are not fired do not build any; or, as the old saying goes, “practice makes perfect.” I even tell my students that in the future it may be possible to learn all of Beethoven sonatas by purchasing a $25 microchip from Apple or Microsoft and plugging it into our skulls, just like we buy a USB flash drive nowadays. But not yet. As of now, to learn anything we still depend on the growth of the myelin sheath, slowly wrapping around the neural circuits we fire—and, significantly, not growing on the circuits we don’t use.

But the problems lurking in the shadows are entropy’s cousins boredom and unhappiness. Because of evolutionary reasons (our Stone-Age brain is wired to pay attention to the sudden emergence of stimuli, rather than to repetitive, non-survival-related events), whenever we—or our students—perform repetitive actions, our focus is gradually lost. With constant repetition, the act of learning, even life itself, risks losing its appeal. Modern Times is in that sense an eloquent manifesto against the dehumanization brought on by early industrialization. Taken to an extreme, this problem is made painfully apparent by disturbing reports about excellent students in top schools of the developed world committing suicide, being crushed by the pressure without pleasure of their everyday lives.

Summarizing, the pedagogical problem is this: to build any skill, the curricular and pedagogical apparatus must consist of repetitive actions gradually expanding in conceptual depth and scope. At the same time, both students and teachers must remain focused, joyous, and inspired all the way through. How could these two ingredients be combined? How could teachers create an environment requiring hard work that is methodical, relentless, and repetitive, so that the myelin sheath gets built, and that at the same time leaves plenty of room for creativity and a healthy emotional spirit?

Improvisation in Classical Western Music

To focus on the problem of inspiration, I will use classical musical improvisation as a case study. The current state of affairs concerning classical music is unique. Classically trained musicians almost never improvise on stage anymore. This relatively recent phenomenon can be traced back to the appearance of the technology for sound recordings at the beginning of the twentieth century. Keeping in mind this absence of real-time public improvisation as one of its main characteristics, musicologist Nicholas Cook describes classical music as a largely static, past-centered “museum,” rather than as a living, evolving practice. The repertoire created during the eighteenth and nineteenth centuries has become canonical. Concertgoers expect to hear the piece the way it sounds on the CD they have at home. If it doesn’t sound like the CD, then they assume that the performer made a mistake. With few exceptions, no performer dares to purposefully stray from the notes written in the score by the venerable masters of the past.

The way music is taught in professional music schools is in part responsible for this expectation. Performers learn one curriculum (which is obsessively focused on performance to the detriment of musical analysis), composers learn another (which is generally lacking high-powered performance requirements), and musicologists and theorists yet another (which has more emphasis on academic content). In the time of Mozart, no musician could afford the luxury of being a specialist in only one of these areas. Nowadays, it would seem that no musician can afford not to be a specialist in just one of these areas.
result, classical performers generally cannot improvise, and classical composers cannot perform.

From time to time a different kind of classical musician emerges, one who is willing to take risks and improvise. Take American pianist Robert Levin, for instance. This classically trained pianist, while playing Baroque or Classical concerti with orchestra, often realizes the continuo accompaniment on the fly during the tutti sections. As well, he may truly improvise the cadenza, rather than play one of the standard ones. His performances are never a mere replica of the repository from the museum. Rather, the improvisatory nature of the performance creates a magical moment reinforcing the sense of here and now, the exhilarating sense of being alive and ready to be touched by the Muse. From the point of view of the audience, knowing that the music is being created as it happens makes the experience much more memorable.

How can one mix hard work that is methodical, relentless, and repetitive, while leaving plenty of room for inspiration, a sense of joy, and a sense of unlimited possibility, so that class sessions—and learning—are all the more memorable? My personal formula gradually evolved over the years to something not far from what Levin does.

The Steel Factory

On the one hand, I do my best to build a rock-solid assembly line, akin to a steel factory, albeit one less hostile than the one in Modern Times! (In The Talent Code, Coyle finds that the premise “Work hard, be nice” is common to many talent hotbeds around the world.) When I design the work for the semester, I plan for an organic circuit comprising the delivery of information through multiple points and modalities, paired with constant checkpoints (drills, prepared and real-time assignments, exams) to ensure that the information is reaching my students and that they are absorbing it. The checkpoints allow me to monitor exactly what is working and what is not, so that I know where to pick up the process the next day. Each one of these stages (drills, assignments, exams) is an opportunity for learning on my part, just as it is for the students, as I am myself exploring the material and learning it anew through their eyes and minds. The first ingredient of the formula is illustrated by Figure 4.

The syllabi that I distribute the first day of classes (or even before classes start, if possible) contain day-by-day descriptions of the lectures and assignments for the entire semester, together with a complete bibliography, specific study strategies, and any other additional sources.

Room for the Muse

One could become too enamored of the “machine” depicted in the Figure 4, to the point of treating it like a canon, a museum. So as not to succumb to this false comfort, the
structure of my courses is sprinkled with instances of chaotic interaction among all the participants. These are situations in which the students and teacher (or teachers) must improvise. Perhaps we have to solve a conceptual problem, or perhaps, even more important, we have to figure out a way to work together. Leaving some room to improvise forces me to take risks, to surprise myself and ask the students (and myself) questions I (or we) never thought of before, and to attempt to answer some of those questions together then and there.

The new diagram (Figure 5) bears some resemblance to the dice-based board games of my childhood, games where, within a well-defined itinerary, the participants would advance two squares or back up three, depending on the throw of the dice. The arrows in different directions imply that the process can be diverted—up to a certain point, only to make the journey more interesting—by the emergence of creative moments. These instances of improvisation may appear themselves in an asymmetrical rhythm, not fully regulated beforehand, so that there is a certain amount of spontaneity and maybe even some healthy discomfort on the part of students as well as the teacher.

The image (right) summarizes the main components of the “Steel Factory” and the “Room for the Muse” modalities, once they are combined.

**Conclusion**

Levin often offers a brief explanation before his unusual improvised performances at the piano, to make sure that his audience has a better contextual expectation of the potential virtues
and pitfalls of the experience. He offers this disclaimer because he generally sees these people only once, during the concert. Teachers, on the other hand, have the advantage of the shared formalized expectation for a long-term process, and therefore enjoy ample time and opportunity to develop a relationship with their students. For this reason, it may be possible to handle the issue of improvisation more flexibly. Teachers may choose to provide an early explanation (or warning) about the fluent coexistence of a solid schedule with instances of creative chaos. This formula may be explained during the first day of classes or by including some language in the syllabus. But teachers may find that in many cases this explanation may not be altogether necessary, given that the students may gradually come to understand the “game”—or, rather, experience the surprise and joy of discovering it—as the semester progresses.

Footnotes


ii. Spoken statement (c. 1903); published in Harper's Monthly (September 1932).


v. Perhaps the anecdote is just a poetic license taken by Newton's biographer: “After dinner, the weather being warm, we went into the garden, & drank tea under the shade of some apple trees, only he, & myself. [A]midst other discourse, he told me, he was just in the same situation, as when formerly, the notion of gravitation came into his mind. '[W]hy should that apple always descend perpendicularly to the ground,' thought he to himself: [O]ccasion'd by the fall of an apple, as he sat in a contemplative mood: '[W]hy should it not go sideways, or upwards? but constantly to the earth's center?’” See: William Stukeley, Memoirs of Sir Isaac Newton's life (1752), the facsimile of which is available online from The Royal Society: http://tta.royalsociety.org/silverlight/?id=1807da00-909a-4abf-b9c1-0279a08e4bf2.

vi. The process is brilliantly summarized in The Talent Code, by Daniel Coyle (Bantam, 2009).


x. One of Robert Levin's improvised cadenzas, as well as an expanded discussion on this issue, can be heard on the 4-part miniseries On the Edge (1992), narrated by Derek Bailey.

xi. The Talent Code, 78.
Some of the resources in one’s “bag of tricks” may be transferred from other teachers or one’s experiences as a student. I believe that the bulk of these resources, however, can only be acquired with actual teaching experience, equally comprising successes and failures while teaching others. The documentary *Comedian* (2002), featuring Jerry Seinfeld, describes the analogously painful process of building a comedian’s routine from scratch, one night at a time, while facing live audiences.

**Martín Kutnowski**

Martín Kutnowski is a composer, music theorist and writer. He teaches music in the humanities at St. Thomas University in Fredericton, where he currently serves as Director of the Fine Arts Programme. He has also taught at City University of New York, Hofstra University, and the Aspen Music Festival, and maintains a busy international schedule as composer, lecturer, and clinician. See [www.contrapunctus.com](http://www.contrapunctus.com).
CURRICULAR PEER MENTORING: ADAPTING ACROSS UNIVERSITIES

Kat Lord, Memorial University of Newfoundland

ABSTRACT

Higher education is the shared home in which students and educators come together in a spirit of collaboration to construct and create knowledge. At least, this is what higher education could be.

Building a home requires a sturdy foundation. Universities, however, are shifting as they adapt to the changing structure of higher education. Class sizes continue to grow, administrative budgets continue to shrink, and professors continue to balance teaching with research and publication. Therefore, we need to draft a solution that provides stability by addressing the competing demands higher education faces in a manner that is cost-effective for the institution, yet engages students and faculty in the mutual pursuit of academic success.

Higher education can find that solution through curricular peer-mentoring, a programming strategy with a blueprint based in the learner-centred paradigm (Cullen & Harris, 2010) and an architecture that can be assessed by The National Survey of Student Engagement (NSSE).

By examining the University of Calgary Arts Peer Mentoring Program, this paper sought to determine (i) What good peer-mentoring practices are; and (ii) How these practices can be successfully programmed, facilitated and adapted from one institution to another. Key findings indicate that peer-mentoring programs are (i) cost-effective, (ii) lead to engagement, and (iii) are transferable. Data gained from this qualitative case study is being used to inform the design of a pilot peer-mentoring program proposed for implementation in Fall 2013 at Memorial University of Newfoundland.

Introduction

As an undergraduate student I served as a junior, and later a senior peer mentor in the University Of Calgary Faculty Of Arts Peer Mentoring Program. That three-year experience has inspired my graduate research into academic mentorship and its potential capacity to address concerns faced by Canadian higher education. This paper focuses on instituting a pilot peer mentoring program at my current institution of study, Memorial University of Newfoundland.

Canadian post-secondary institutions continue to address an increased demand for post-secondary education during a time of budget constraints (CAUT, 2012). In doing so, there are important considerations to be made about how to best approach supporting student learning while maintaining a high quality learning experience without overburdening faculty or institutional budgets. Many universities continue to rely on external classroom supports that can be costly to run, and which require students to realize they need additional academic support, have the time to access it, and feel comfortable enough to do so. Studies suggest, however, that the best type of academic support is that which is embedded directly into the classroom (Arendale, 2004). Classroom supports that are not removed from a student’s course materials and work also run less risk of stigmatizing students who need additional support. Classroom-based support might also cut down costs associated with running academic support programs by centralizing the administrative support for the program (Smith, 2008).
There are a number of pedagogical methods centered in the constructivist epistemology – such as experiential learning (Kolb, 1984), collaborative learning (Dillenbourg, 1999), problem-based learning (Hemlo-Silver & Barrows, 2006), and communities of inquiry (Lipman, 2003; Garrison & Arbaugh, 2007) – designed to support student learning within the classroom, but they often require a significant amount of planning, guidance, and attention on behalf of the instructor and institution in order to execute them. Public funding to universities, however, has been cut in half within the last two decades and subsequently universities are increasingly forced to rely on student tuition (which not constitutes 35% of university operating budgets nationwide) and reduced expenditures on academic staff, to withstand the strains of increased student enrollment and respond to the new expectations of a university education (CAUT, 2012).

This affects the quality of university education because it increases the student-faculty ratio (Davenport, 2001) and some scholars argue this, coupled with lower faculty teaching loads and less emphasis on student academic engagement, has led to an overall decline in undergraduate learning outcomes (Clarck, Trick & Loon, 2011; Arum & Roska, 2011; Green & Riddell, 2012) at a time when Canadian industry needs a highly educated citizenry to support its economic innovation and development (Council of Canadian Academies, 2009; Baum, Ma, & Payea, 2010; Lynch, 2012). Meeting this demand requires innovation in how we educate at the university level. Curricular peer mentoring is one method of responding to these many demands by implementing a learner-centered approach that is both low-cost and wide-reaching.

The Learner-Centered Paradigm

Contemporary notions of learning describe education as an active process of teaching people how to think about the content of what they are learning, and assisting them in adapting, organizing and communicating what they have learned. In many ways academic peer mentoring is at the heart of the constructivist epistemological paradigm that values collaboration and knowledge interpreted through individual experience (Dillenbourg, 1999; Fosnot, 2005; Golding 2011; Corrigan, 2012). Constructivism holds that: (i) knowledge is not passively accumulated, but rather, is the result of active cognizing by the individual; (ii) cognition is an adaptive process; (iii) cognition organizes and makes sense of one’s experience; and, (iv) knowing has its roots in both biological and neurological functions, as well as social, cultural, and language based interactions (Doolittle, 2003).

Constructivism is therefore informed by cognitive science, which sees knowledge creation as tied to personal context (i.e. affective states, intuition, or interpretation) and not based solely on rote learning (Creach, 2011 Wierzbicka, 2011, p. 43). It is consequently associated with the pedagogy of meaningful learning, which connects new knowledge to prior knowledge by building on the learner’s previous experience (Novak, 2008; Mayer, 1999). Student-centered learning (SCL) is one perspective that attempts to take the learner’s entire educational experience into account (Cullen & Harris, 2010).

This learned-centered paradigm, as applied to higher education, was promoted in the article, “From teaching to learning: A new paradigm for undergraduate education” (Barr & Tagg, 1995). Barr and Tagg (1995) followed another influential article advocating a constructivist approach to education, “Seven Principles For Good Practice in Undergraduate Education” by Chickering and Gamson (1987).
who emphasized that university pedagogy should:

- Encourage contacts between students and faculty
- Develop reciprocity and cooperation among students
- Use active learning techniques
- Give prompt feedback
- Emphasize time on task
- Communicate high expectations
- Respect diverse talents and ways of learning

These characteristic of good practice are elements of the student-centered learning paradigm that Barr and Tagg advocate for in their work. The goal is to create “environments and experiences that bring students to discover and construct knowledge for themselves, to make students members of communities of learners that make discoveries and solve problems” (1995, p. 17).

The philosophy behind this learner-centered paradigm is now guiding one of the largest assessment tools to evaluate universities themselves – the National Survey of Student Engagement (NSSE) – which examines the student learning experience within Canadian and American post-secondary institutions (NSSE, 2011). The survey now has over 1400 institutional participants (NSSE, 2011), and its questions are associated with five specific “Benchmarks of Effective Educational Practice” that evaluate: the level of academic challenge offered by institutions, whether theirs is a supportive campus environment that places an emphasis on active and collaborative learning, with potential for student-faculty interaction, and enriching educational experiences. The rationale for choosing these particular assessment criteria has its basis in empirically confirmed pedagogical practices that support high-quality undergraduate student outcomes (Kuh, 2003), stemming from the learner-centered paradigm. These benchmarks underpin an overall approach to facilitating learning that can be met by a specific type of academic support program – curricular peer mentoring – that emphasizes a challenging, collaborative, and supportive learning environment.

**Curricular Peer Mentoring**

Peer mentorship that is formally instituted in undergraduate programs can be called by many names: peer teachers, peer tutors, peer facilitators, peer leaders, SI (supplemental instruction) leaders, and are often practiced in many different ways leading to confusion over terminology and definitions (Budge, 2005, p. 77). There are, however, commonalities shared across these different representations of peer mentoring. According to results returned from an extensive review of the literature on peer mentoring programs in higher education recently conducted by Smith (2012), these include:

- Increased student academic success as indicated by higher student grades, pass rates, and overall retention in their selected major programs and/or institution year to year
- Increased graduation rates and earlier graduate times
- Increased student competence in critical thinking, cooperation and collaboration, communication, technological skills, etc.
- Increased student engagement and active learning
- Increased openness to diversity and challenge
- Increased development of peer mentors themselves, including advancement in their leadership and communication skills, deeper learning of subject matter they mentor on, and increased ties to the university program, department and institution post-graduation
- Increased teaching ratings for instructors, increased participation in professional
development programs, and higher morale ratings

Although there are many different types of academic support programs, those embedded directly into courses themselves seem to be most successful in helping students develop the skills and attributes listed above (Topping, 1998; Arendale, 2004). Curricular peer mentoring – wherein mentors tutor students directly on the course material – correlates well with the criteria tested in the NSSE benchmarks and can combine many learner-centered pedagogies into one program.

For example, curricular peer mentors can work with instructors from within the classroom to help foster ‘learning communities’ that build relationships between the students themselves, and their instructors, to help support and engage students in their learning (Lipman, 2003; Smith, 2007). Mentors can help instructors achieve specific learning outcomes and also help students generally improve their critical thinking skills, conceptual thinking, literacy skills, and communication skills, through facilitated group work, individual mentoring sessions, and guided questioning within the lecture hall. Although curricular peer mentors do not mark student work in order to avoid any conflicts of interest and unhelpful power dynamics, they can also provide informal feedback on student work to help instructors with their formative assessment metrics (Smith, Rabbitte & Robinson, 2009). Students therefore get the support or challenge they need, and their instructors benefit from an increased awareness of the classroom experience, can access to timely formative feedback on student progress, and can design more challenging coursework. Administrators and the institution generally, benefit from a program that is cost-effective to implement and run (Smith, 2008) and has the ability to directly improve their NSSE results.

University of Calgary Arts Peer Mentoring Program

The University of Calgary Arts Peer Mentoring Program was established in 2005 in the Faculty of Communication and Culture, and is a prime example of an effective curricular peer mentoring program. The program pairs outstanding undergraduate students with an instructor who hosts them in the same course they, as a student, have already excelled at. These students act as curricular peer mentors to other students going through that course for the first time by facilitating in-class activities that enhance student understanding of course subject matter and help improve student academic skills. They do this by showing students how to engage with lectures, learning materials, and learning processes in a meaningful manner by asking questions in class, providing input in class discussions, facilitating group projects, and helping students with conceptualizing course themes, content, and assignments (Smith, Rabbitte & Robinson, 2009). They can also provide extracurricular support to students by assisting with group activities and any possible group issues, organizing study groups, and discussing any student concerns about the course materials in-person and online, assignments, and expectations. All students within the course can benefit from engaging with a mentor who is interested and excited about the material, and who has recently ‘walked in their shoes’ as a fellow student.

At the University of Calgary, curricular peer mentors are prepared for their work by enrolling in a senior-level seminar course that examines the philosophies and practices of teaching and learning, and which incorporates a service-learning component (a 40 hour practicum which is the time they spend mentoring in their host course) for course credit (Smith, 2008). Thus, the seminar course is not only a training ground for the mentor, it also acts as a vehicle for encouraging students to
commit to their mentoring responsibilities by tying it to a three-credit, semester-long course. Additional to the mentoring seminar course is a weekly or bi-monthly meeting the mentor (or mentoring team) has with their host instructor to address any concerns arising from the class; this also serves as a participation incentive. These more formal motivators are additional to the benefit the mentors derive from their mentoring practice itself that helps them enjoy a greater understanding of course content, shape valuable leadership and community-building skills, and also build relationships with their host instructors that benefit their future study and opportunity within the university. The can also add their work and study as a curricular peer mentor to their CV, and where possible, their co-curricular record as well.

The University of Calgary Arts Peer Mentoring program operates on a minimal budget that only requires paying for administrative support to perform record-keeping and data entry (not requiring a physical operating location), covering the hospitality costs of the annual introductory workshop for all peer mentors and host instructors, as well as covering costs related to the seminar course itself. Given the growth of the University of Calgary mentoring initiative, which is now established in the university’s Nursing, Medicine, and Business faculties, and is just beginning to expand into the Sciences, the program also has the ability to work effectively across disciplines while being administered centrally. With program growth from 8 mentors and 6 host instructors in Fall 2005 to 24 mentors and 12 host instructors in Fall 2011, and over 6000 students served in 36 courses at all levels of study across 15 disciplines/programs (Smith, 2012), there is no denying the ability of the program to grow, adapt, and respond to institutional needs. Furthermore, the majority of student survey respondents self-report that curricular peer mentoring has improved their learning experience and outcomes (Smith, 2012; Figures 1 and 2).

Notice that respondents do not report curricular peer mentors as having a negative effect on their learning and classroom experience, and that the majority of students in fact report high levels of satisfaction in both learning environment and academic benefit (Smith, 2012; Figures 1 and 2).
these areas. Furthermore, many highly positive student responses directly correlate with NSSE benchmarks, such as ‘active and collaborative learning’, a ‘supportive campus environment’ and ‘academic challenge’ (NSSE, 2012). For example, 47% of the 409 survey respondents report the course was significantly more student-friendly, 38% reported that their learning experience was significantly more interesting and enjoyable, and a further 37% agreed that curricular peer mentors significantly affected their morale and self-confidence while also supporting them to be active participants in learning within and without the classroom. The value of curricular peer mentors to academic learning and skills acquisition is also pronounced, with 34% of students reporting curricular peer mentors significantly enhanced their understanding of the subject matter.

Curricular peer mentoring as practiced by the University of Calgary Arts Peer Mentoring Program can therefore be an effective method of addressing concerns faced by Canadian institutions of higher education today because it directly addresses metrics associated with best practices in teaching and learning as identified by NSSE without overextending institutional budgets.

Making a Case for Curricular Peer Mentorship at Memorial University

Memorial University of Newfoundland is one of the participating NSSE institutions. Not only does it have a keen desire to improve its NSSE benchmark scores by adopting student-centered learning practices, it also has an institutional mandate to improve its research, engagement, and teaching and learning activities (MUN, 2007), all of which can be facilitated through curricular peer mentoring. There are still specific barriers to overcome, however, before a curricular peer mentoring program can be easily implemented in any institution – even those with a keen interest in teaching and learning, and a mandate to specifically serve their student community – such as Memorial University.

General Barriers to Implementation

1) Faculty – Administration Divide
I think curricular peer mentoring has the capacity to speak to two very separate groups within the academy – academics and administrators. As I move to implement this program I am aware that I am speaking to two divergent audiences: Faculty, who are focused on improving the qualitative learning experience within the class, and administrators who are focused on positively increasing the quantifiers “measuring” that classroom experience at an institutional level. Although these parties are often at odds, their goals do not have to be. To that end, I think NSSE is the best large-scale method of evaluation we currently have to determine the usefulness of a learning experience. It also serves as an evaluative tool that captures the characteristics of good teaching and learning as stemming from a constructivist epistemology.

2) Funding
I think curricular peer mentoring has the capacity to reduce overall administrative costs associated with offering academic support services. Academic support that happens inside the classroom and/or is directly related to the classroom material is generally more effective than support offered outside the classroom. An in-class academic support program such as curricular peer mentoring relies on minimal administrative support while increasing accessibility of academic support for students in the classroom. Curricular peer mentoring can work in various disciplines. Presently, however, there appears to be more attention being paid to undergraduate programming initiatives and projects meant to reduce institutional costs that are high-profile and make use of technology.
(i.e. Massive Open Online Courses) then there is a focus on low-profile solutions (AUCC, 2011).

3) Bureaucracy
As I work to set-up a curricular peer mentoring program, I am increasingly aware, at times, of the limitations of restrictive bureaucratic processes. For example, each university will have a different type of calendar structure, and often this will be differentiated between departments and/or faculties. The calendar structure, and its relative flexibility, is vitally important to offering a curricular peer mentoring program – or any innovative academic program. This requires, however, an ability to incentivize peer mentors with non-monetary compensation, particularly course credit. This relies on a flexible university calendar that will accommodate the addition of an undergraduate course.

Considerations Specific to Memorial University

Firstly, it is important to note that my program received a significant amount of support from faculty and administrators at the institution, but even so I still faced specific barriers to implementation due to the larger realities of creating institutional change as a graduate student due to the hierarchical nature of universities.

For example, at Memorial University there are no ‘general studies’ course designations available to list a new course under as there are at the University of Calgary. Even special topics courses that are introduced to the calendar need to have a discipline specific course code. This means I could not add a peer mentoring practicum course as a standalone course or a special topics course as there was simply no premise or procedure for doing this within the normal operations of the calendar. Therefore, I immediately faced an administrative barrier when attempting to implement a pilot peer mentoring program because I was unable to directly offer the senior seminar course needed to train, support, and incentivize curricular peer mentors in the university calendar.

I could have, however, negotiated the support of an academic department to situate the program practicum course within it. To do that, I needed to locate funding for the teaching staff as most academic departments at Memorial University have a maximum expenditure on per-course-instructors per semester. Therefore, unless the instruction of my pilot program seminar course could be tied to the teaching course load of a tenured faculty member, the department budget would have to cover the costs of paying a per-course fee for teaching the mentoring practicum course.

This highlights the next barrier I encountered in my attempt to set-up a curricular peer mentoring pilot program: who would instruct the course? Having participated in the University of Calgary Arts Peer Mentoring Program for a number of years, and then developed all pilot program course materials and program structure for implementation at Memorial University, I was hoping to be the instructor-of-record. Although I already had one per-course-appointment to my name, establishing my initial capacity to be a university lecturer, it was simply not enough. The environment at Memorial University is similar to many other institutions that have embedded hierarchies, which made it hard to find a department willing to divert a portion of its per-course instruction budget to running a course not directly aligned with its departmental purview and paying me – a novice – to teach it. I therefore needed to find a senior instructor who would both champion the program to his/her department and be willing to take on teaching the seminar course and overseeing the practicum process. Luckily, I have recently found one and can now (possibly) move forward with launching the program.
Next Steps:

Provided the barriers to implementation I am currently experiencing in bringing my pilot peer mentoring program to Memorial University can be overcome, the intention of my research moving forward is to implement this program within the Faculty of Arts, then begin expanding it to other disciplines and programs at Memorial University. As the process unfolds, I will be carrying out a detailed mixed-methods case study that:

- Tracks individual student academic data in courses with mentors compared to the same or similar courses without
- Evaluates the effectiveness and overall cost of curricular peer mentoring in relation to other academic support programs
- Underpins this quantitative data with qualitative research conducted through surveys and interviews with students, mentors, host instructors, and administrators

From there, the overall project goal is to begin extending curricular peer mentoring programs to other Canadian universities in order to continue collecting data on peer mentorship and reforming the program to meet the shifting needs of various agents within higher education.

Conclusion:

Curricular peer mentoring has the potential to provide high quality academic support for a variety of students in a class, from those who struggle with the material to those who excel. The program also provides valuable experience for upper-level students. One advantage to mentors in the classroom is the creation of a learning community that is satisfying for both the mentors and mentees. Furthermore, the costs of the program can be minimized, depending on how it is administered. Thus, for students – either the mentor or the mentee – and for educators and administrators, curricular mentorship is a win-win solution.

Acknowledgements:

The author would like to thank Dr. Tania Smith, Dr. Ronald Glasberg, and Instructor Lisa Stowe for introducing her to curricular peer mentoring and continuing to support her research and other academic pursuits. She would also like to thank Albert Johnson, Dr. Trudi Johnson, Dr. Doreen Neville and Dr. Noreen Golfman for their interest in adopting a curricular peer mentoring program at Memorial University of Newfoundland, and the support they have offered me to date. Finally, she would like to recognize it is through the support of the Social Sciences, Humanities and Research Council Joseph-Bombardier Masters Scholarship program that she has been able to pursue her graduate research.

References:


Clark, I.D., Van Loon, R.J., & Trick, D. (2011). *Academic reform: policy options for improving the quality and cost-effectiveness of undergraduate education in Ontario.* Kingston, ON: School of Policy Studies, Queen’s University


Lawless, B. (2009). Guiding class consciousness in first-generation college students: A pragmatic approach to classism in the academy. In Housel,
T. H. & V. L. Harvey (Eds.), *The invisibility factor: Administrators and faculty reach out to first-generation college students.* (pp. 23-34). Boca Raton, FL: Brown Walker Press.


---

**Kat Lord**

Kat Lord is a Master’s candidate in the Masters of Philosophy in the Humanities program at Memorial University of Newfoundland. Her research interests include communication, civic discourse, critical thinking, constructivism, education, engagement, labour market demands, learning, mentorship, peer support, productive pedagogy, student success, teaching, undergraduate education, university administration, and the knowledge economy.
PROFESSIONAL-GRADE CONVERSATIONS: ENGAGING ONLINE STUDENTS WITHIN AN ACADEMIC CONFERENCE FRAMEWORK

Peter D. MacIntyre, Cape Breton University

ABSTRACT

As academics, we have conversations in classrooms, in journals, and at conferences. As a designer of a new course in positive psychology, while also serving as a national conference co-chair, I found I could bring the excitement of an academic conference to the online students through course design. Drawing upon motivational frameworks in psychology, course elements were made cohesive by overlaying a conference model that included plenary speakers, coffee break discussions, and active learning activities.

This paper describes the development of a new online course in positive psychology, using the qualities of an academic conference as a guide. The focus here is on the process of developing the course, its structure, key elements and objectives. The idea of offering an online course as if it were a professional academic conference allowed for the integration of course elements to promote student engagement, autonomy, and learning. A search of the literature has not identified another course that has been developed using this approach.

The Context

The number of psychology faculty members at Cape Breton University (CBU) has been reduced in recent years. At the same time, pressures to adapt the program to the changing face of psychology were mounting. In addition, the department was asked to increase its online course offerings. For almost 15 years, three full-year psychology courses (Social, Personality and Developmental psychology) had been offered at the second year level, first by correspondence and more recently with online delivery. In 2010, the Introduction to Psychology course was developed for online delivery. To allow students to complete a degree entirely online, psychology faculty have been under some pressure to either create new courses or adapt existing third and fourth year undergraduate courses. The most pressing need was among students in the Bachelor of Arts Community Studies who would be unable to complete their program online without online course offerings. Therefore, there was a need for new online offerings at the third-year, undergraduate level. A departmental planning and review process in 2010-11 identified a need for a new course to expand into an emerging area, positive psychology. At that time, Saint Mary’s was the only other Atlantic Canadian university to have a course in positive psychology. The Positive Psychology course was offered at Cape Breton University (CBU) for the first time from January – April, 2012.

What is Positive Psychology?

Much of psychology is focused on disorders and problems in development; in contrast, positive psychology is the study of how human beings prosper and live well (Seligman & Csikszentmihalyi, 2000; Seligman, 2003a). One of the goals of positive psychology is to identify and enhance the human strengths and virtues that make life better, allowing individuals and communities to thrive (Seligman, 2006).
Positive psychology was named in 1998 by then president of the American Psychological Association, Martin E. P. Seligman. At present, it is an emerging field within psychology, with roots in humanistic psychology but based on an empirical research foundation (Seligman, 2003; Peterson, 2006). There are now graduate programs, conferences, and new scholarly associations in the field. The Canadian Positive Psychology Association held a biennial conference in 2012, the first such conference in North America, and maintains a web site at positivepsychologycanada.com. The field also has its own scholarly journal (the Journal of Positive Psychology) and well respected handbooks (e.g., the Oxford Handbook of Positive Psychology). It has grown up during the digital age with numerous high quality resources available online. In particular, Martin Seligman has developed a series of Youtube videos to explain positive psychology and promote his books, such as Authentic Happiness and Learned Optimism (Seligman, 2003b; Seligman, 1998). Other leaders in the field also are available via online video, sometimes offered by sites such as TED Talks, interviews posted on university web sites, or conference presentations that have been recorded and made available on the internet.

A conference in positive psychology

The idea for the conference approach came when I was developing the new course at the same time as serving as one of the co-chairs of the bid committee to host the 2013 annual conference of the Society for Teaching and Learning in Higher Education (STLHE). It occurred to me that conferences are an important way in which faculty teach each other, mixing lifelong learning with professional development. Conferences must be both academically and socially rewarding. The conference metaphor was applied to the design of the new course as a way to engage students in online, professional-level conversations.

There are various challenges and benefits when teaching and learning online, most of which were salient to course design; these will not be reviewed in detail here (see Abdelraheem, 2003; Anderson, 2008; Bender, 2003). The most salient challenge was to promote active learning in the online environment. Positive psychology requires student action (Biswas-Diener & Patterson, 2011; Haines, 2011). The course textbook, A Primer in Positive Psychology (Peterson, 2006), proclaims that “positive psychology is not a spectator sport” and strongly encourages students to become active in learning by doing.

Learning by doing is consistent with an intrinsic approach to motivation (Deci & Ryan, 1985, 2004) that sustains learning in ways that extrinsic motives cannot. Unfortunately, one of the difficulties in offering a university-level course is that the extrinsic rewards (grades, rankings of students, credentials, etc.) can interfere with the intrinsic value of learning (Deci, Koestner, & Ryan, 1999; Tang & Hall, 1995). An additional issue in the online environment are those who expect a free ride (Roberts & McInerney, 2007); allowing free-riders would be antithetical to the values of personal development espoused within positive psychology. It would be hypocritical to violate the principles underlying the field in the teaching of them; a major goal of course design was to achieve active student participation.

The course became “An Online Conference in Positive Psychology” in order to emphasize active learning tasks to students in the course. In thinking about the reasons why I attend conferences that would overlap with why students take a course for credit, three reasons stood out:

- A conference adds to an individual’s curriculum vita by exposing his or her work to critique.
- A conference draws together prominent scholars that one cannot hear elsewhere.
- A conference allows for networking with, and learning from, other presenters.
Each of these elements was built into the course design, and integrated with the active learning tasks. Consistent with the conference theme were course requirements for proposal & presentation, a series of plenary speaker videos, and online reactions called Coffee Breaks. Integrated with the conference elements were active learning materials including a course theme song, legacy statements, TRACK (The Random Act of Compassion or Kindness) assignments, and a self-improvement project. Each will be described below.

The course attracted 35 students (the course cap); 30 students completed the course. The students were very active in the course. Statistics from the Moodle course management system will be presented with each of the activities to show the level of engagement with the tasks.

Specific Course Elements

An audio message about grades (accessed 38 times): One of the first entries in the course was a message from the course instructor. The audio message emphasized the need for active involvement several times per week. “This course rewards the grinders who show up every day.” Students were encouraged to value learning above grades, trusting that grades would reflect learning. It was emphasized that grades were to be earned by active participation in discussions and experiential activities.

Theme Song & Analysis (963 views, starting week 1): The course activity began with a theme song analysis. I selected a song entitled “Today I’m Gonna Try and Change the World” by Canadian singer-songwriter Johnny Reid. A link in Moodle brought students to the official YouTube video for the song posted by EMI Music Canada. My own analysis of the song centered on the word “and” in its title. The posting read in part: “…and is the connection between trying and changing the world. To say Today I’m Gonna Try is a commitment to do something, its effect will be to change the world. That’s why and works so well in the song title.” Students submitted their own interpretations, elaborated on their reactions to the lyrics, and offered other songs they found inspirational. The song was more than a fun way to begin the course. The message of the song is that a small act of kindness can change the world, a perspective that rippled through the rest of the course.

To use the theme song to full effect, and to provide a sense of symmetry, the final exam returned to the song title as the topic of the only long essay question. The core of the exam question asked students how they might change the world using the principles of positive psychology. Students were encouraged to draw on all of the learning materials posted in the course, and their experiences with course activities. The instructions noted that the responses would be evaluated for “well structured, well written essays that show you can integrate concepts from the course in a meaningful way.”

Introduce Yourself by Describing You at Your Best (543 views, starting week 1): An online course sometimes can struggle with students getting to know each other, yet networking is a key reason to attend a professional conference. An exercise suggested in the textbook (Peterson, 2006) as an in-class activity was adapted for use online. Students were asked to introduce themselves by describing ‘you at your best.’ Instructions requested a story about a moment of pride that reflected the writer’s core values. Students shared stories about their families, hobbies, good deeds done for neighbours, and even missionary work with a church.

Legacy Statement (868 views, starting week 1). This experiential assignment had two parts, finding and posting a tribute to another person who has passed away and then writing the student’s own legacy, that is, how the student
might wish to be remembered. Twenty students linked to online tributes for well-known persons such as Martin Luther King, Rosa Parks, Terry Fox, Johnny Cash, Christopher Hitchens, and Jack Layton. Other students wrote legacies for friends, relatives, and former teachers. One especially poignant entry was about a student’s late father, his poverty, criminal history, and substance abuse. However, the student emphasized that her father was not defined by his flaws. She wrote that he would never pass someone in need, he loved to laugh, and was grateful for every meal, many of which came from a food bank. Other students praised the author’s honesty and ability to extract positive out of the negative, which is a theme that ran through the course. The second part of the assignment was a personal legacy statement that could be uploaded privately (n = 20) or in a forum that other students could read (n = 12). The legacy statement was included in the self-improvement project later in the course.

Conference Proposal & Presentation (1994 and 1464 views respectively): The proposal and presentation replaced the traditional term paper in the course outline, and was one of the key elements of the conference approach. Third-year courses in psychology on campus at CBU typically require a term paper, and often a classroom presentation. Teaching online, using a conference theme, meant establishing that students were responsible for contributing to the learning of other students by making a presentation. To facilitate the grouping of similar topics, and to give each student a unique presentation topic, proposals had to be accepted by me before students began their research. Six groups of approximately 5 students each, called ‘Presentation Rooms,’ were formed based on the grouping of topics in the Oxford Handbook of Positive Psychology (Lopez & Snyder, 2009).

I wrote an individualized letter of acceptance to each student. Each one had the phrasing “... your proposal is ACCEPTED” and “...we look forward to your presentation.” A handful (n = 5) of proposals either duplicated an existing topic or initially were insufficiently detailed. Those proposals were sent back to the student for revision. Ultimately, all student proposals were accepted.

Conference presentations were most often submitted as a formal paper. One student, however, used annotated PowerPoint slides to give the most creative of the presentations. All students commented on the other presentations in their room. None of the students included their own audio or video recordings, even though that option was available to them. I can note that, for the second offering of the course that is presently running, a creative supplement was required. This requirement worked very well. Students wrote original poetry, performed original songs, uploaded photos or a collage of photos, invented a game, and offered other creative expressions linked to the topic of their presentation.

Plenary Speakers (on average 53 viewings, ranging between 28 and 96 view each): The goal of the plenary speakers was to present the theorists in a video format, rather than simply reading about them in the textbook. See Table 1 for a list of speakers and topics. The most frequently used source of video in the course is the TED Talks series. Speakers invited to TED conferences are asked to ‘give the talk of your life in 18 minutes.’ Designed in part for educational use, each talk is professionally edited and accompanied by an online transcript. Deciding on the most appropriate speaker took a great deal of preparation time. One advantage of using online video is that speakers do not have to be alive. Three of our plenary speakers (Art Buchwald, Viktor Frankl, and Leo Buscaglia) have passed away.

Each plenary speaker was given a formal audio introduction by the course instructor (typically one or two minutes in length) that made clear the reasons for inviting that speaker to the conference, and what
student delegates are likely to take away from the talk. Formal introductions often are made for plenary speakers at a conference. Each introduction situated the speaker within the course and alerted students to key content in the video. In some cases, the introduction was supplemented by a viewing guide document that presented a transcript of the speaker’s talk or a summary of their arguments.

Coffee Breaks (on average 609 views each, ranging between 366 and 936 views): The networking that is done at conferences is often done between sessions, at the coffee breaks. To simulate the experience for students, each plenary speaker had an online forum called ‘Coffee Break.’ Students were encouraged to integrate content from all parts of the course in coming to their opinion of each speaker. Student responses to the coffee breaks ranged from brief to impressively insightful. As the course proceeded, it became clear that a majority of students were interacting with the course materials, especially the videos of plenary speakers, in a personally meaningful way. They described posting links to the speakers on their FaceBook pages or watching the videos with a parent or partner. The coffee break posts described how the students were taking the speakers’ message beyond the course and engaging in conversations about what they were learning.

The random act of compassion or kindness (TRACK) assignments. These assignments required the students to do something in the community and then write about its psychological impact. A day or two notice was given by email that a TRACK assignment was coming, with the intent of creating a sense of anticipation. The specific assignments built on each other and became progressively more elaborate:

1. Sincere, unexpected complements (432 views): Students were required to give five sincere but unexpected complements to another person and write their reaction in tweet form (144 characters or less) as part of a WIKI document posted in the course. A total of 143 tweets were posted complementing parents, restaurant servers, strangers, and many others. Student comments clearly indicate that they noticed how appreciative other people can be.

2. Perform an altruistic act (758 views): Students were required to perform an altruistic act, such as clearing snow, buying a coffee for the next in line, or clean up an area, without telling the recipient what they had done or who did it. Students then debated in an online forum whether true altruism exists or can exist. Many correctly indicated that the points available for the assignment had an impact on whether their acts should be considered altruistic, but others suggested that it is the deeper reasons for acting that define an act as altruistic.

3. Use signature strengths in a new way (1037 views): The Values in Action (VIA) survey is an online research tool well known in Positive Psychology that measures 24 character strengths (such as perseverance, honesty, kindness, etc.). After completing the survey and identifying their top 5 strengths, students chose one strength and used it every day for a week in a new way. It was emphasized that they had to identify a novel application of their strength.

4. Advocate for changes in your community (541 views): In this assignment students had the option of signing a petition that was being hand delivered to a conference hosted by the United Nations that was attended by our department chair. The petition recognized the need to expand beyond traditional indications of economic progress (such as GNP, GDP) to include measures of happiness, sustainability, and justice. Students also wrote letters to the editor of the newspaper, the Nova Scotia Ministers of Education, Transportation, and Health, their Mayor, the parish priest, and others.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Plenary Speaker</th>
<th>Topic or Title</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is positive psychology?</td>
<td>Martin Seligman</td>
<td>• What is positive psychology</td>
<td>Zeitgeist Minds (via YouTube video)</td>
</tr>
<tr>
<td>Random Acts of kindness</td>
<td>Art Buchwald Johnathan Zittrain</td>
<td>• “Love and the Cabbie”</td>
<td>Online text</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• “The web as random acts of kindness”</td>
<td>TED Talks (video)</td>
</tr>
<tr>
<td>Positive Emotions</td>
<td>Barbara Fredrickson</td>
<td>• “Positive emotions open our minds”</td>
<td>Greater Good Science (via YouTube)</td>
</tr>
<tr>
<td>Happiness</td>
<td>Ed Diener Dan Gilbert Barry Schwartz Malcolm Gladwell</td>
<td>• Discussion with a student • Synthesizing happiness • “The Paradox of choice” • “Choice, happiness and spaghetti sauce”</td>
<td>YouTube TED talks TED talks TED talks</td>
</tr>
<tr>
<td>Values and Meaning</td>
<td>Viktor Frankl</td>
<td>• “Interview with Dr. Viktor Frankl – Part 1”</td>
<td>Logotherapy Institute (YouTube)</td>
</tr>
<tr>
<td>Signature Strengths</td>
<td>Martin Seligman</td>
<td>• Identifying signature strengths (VIA)</td>
<td>Authentic Happiness (Youtube)</td>
</tr>
<tr>
<td>Optimism</td>
<td>Robert Wright Steven Pinker Barbara Eherenreich</td>
<td>• “The logic of non-zerosum progress” • “The surprising decline of violence” • Daily Show interview</td>
<td>TED talks TED talks Comedy Central</td>
</tr>
<tr>
<td>Interests, Abilities &amp; Accomplishments</td>
<td>Sir Ken Robinson</td>
<td>• “Do schools kill creativity?”</td>
<td>TED Talks</td>
</tr>
<tr>
<td>Love &amp; Positive Relationships</td>
<td>Leo Buscaglia</td>
<td>• “Speaking of love (parts 1 – 6)”</td>
<td>Youtube (PBS program)</td>
</tr>
<tr>
<td>Enabling Institutions</td>
<td>Silver Donald Cameron Hans Rosling, Angus MacIntyre</td>
<td>• “Bhutan and the pursuit of gross national happiness” • “200 countries, 200 years, 4 minutes” • “Jobs are not the answer (but then what is?)”</td>
<td>TEDx Halifax (YouTube) Gapminder Web (video) Online text</td>
</tr>
<tr>
<td>Future Directions</td>
<td>Mihaly Csikszentmihalyi</td>
<td>• “Flow: the secret to happiness”</td>
<td>TED talks</td>
</tr>
</tbody>
</table>
A Self-improvement Project. To reinforce both the active nature of Positive Psychology and its empirical foundations, students were required to take a research-oriented approach to self-improvement. A small self-improvement initiative was proposed by each student and submitted for instructor approval. The aim of the project was to create a small change and document its ripple effects. The proposed change was stated in the form of a hypothesis that could lead to measuring the effect of the change in a clear, specific, empirical, and appropriate way. Outside observers such as friends, parents, or partners who were blind to the hypothesis of the project were employed by the students to make specific measurements. An example intervention hypothesis was offered. “If I say thank you every time I leave a room, for a week, I will notice an improvement in my mood at the end of the day.” Students were advised to choose a specific variable to be measured (e.g., daily mood) as if doing an experiment. Sources of biased measurement were to be documented and avoided (if possible).

Future Research

This course is also the subject of an ongoing research project entitled “Teaching positive psychology as sustainable civic engagement.” The research is being conducted with a colleague (Dr. Tanya Brann-Barratt) who specialized in qualitative, action-oriented research with youth. Two focus groups have been held with students from the first cohort, yielding approximately two-and-a-half hours worth of audio commentary. Students’ reactions were highly positive. They told stories about engaging their family and friends in the course material, the positive effect the course had on their sense of health, and plans to keep learning in this area.

The research project was conceived only after the course was complete, when the effect on the majority of students was becoming clear. Therefore, post hoc permission had to be obtained to use materials posted in the course. A letter from both Dr. Brann-Barratt outlined the research process and the safeguards for anonymity, confidentiality, and informed consent. As the instructor, I did not know who gave permission until after the final grades were submitted. One advantage of seeking post hoc permission is that the students could be assured that course activities and grades were not associated with giving research consent. More than half the class gave permission to use all of their posts, and these persons tended to be the most active students.

It is important to keep research ethics at the top of the mind when blending teaching and research (see Vella-Brodrick, 2011).

Conclusions

Designing this course used much of what I have learned in approximately 20 years of university teaching combined with what I have learned from attending conferences. The course content was rigorous and demanding but also engaging; the materials were interesting and highly integrated across audio, video and texts. The various course elements – plenary speakers, experiential exercises, self-improvement paper - supported each other. The approximately 30 students used course materials extensively, some items with over 1000-views. Students formed an online community and as the instructor, I feel that I got to know them better than if they were in a classroom on campus. The energized feeling that one often gets from participating in an academic conference can be brought to the online teaching environment. Overlaying a conference motif is one way to give students access to professional-grade conversations.

References


PRODUCING AN ONLINE ARCHIVE OF ATLANTIC CANADIAN POETS
IN THREE PARTS

Enthusiast: Lisa Banks (St Thomas University Student and former ACPA Managing Editor)
Skeptic: Patrick O’Reilly (St Thomas University Student and ACPA Managing Editor)
Pedant: Kathleen McConnell (St Thomas University Professor and ACPA Eminence Gris)

ABSTRACT

In script form, denoting the cooperative nature of the ACPA project, “Producing an Online Archive of Atlantic Canadian Poets” describes the genesis, character, and potential of the Atlantic Canadian Poets’ Archive (acpa@stu.ca). The ACPA is a source for poems by, critical analysis of, biographical information on, and scholarly sources for, poets from this region. The idea sprang from an honours seminar titled Atlantic Canadian Women Poets; participants discovered that there are few scholarly articles and no published book-length studies dedicated to the poetry of the region and decided to do something about it. Thus, the Atlantic Canadian Poets’ Archive arose from students’ needs, and was expedited by students’ energy. By spring 2013, the ACPA has provided employment for four students through grants from STU and from the federal SEED program; it has grown to include nineteen entries by twelve students and one professor, with more to be posted soon. One of the contributors is from the University of New Brunswick in Saint John, and there is an ongoing effort to encourage professors from other universities to build assignments around ACPA entries, and submit them to us. Though not peer-reviewed, the ACPA provides valuable resources for scholars, and a place for students’ work to have a life beyond the claustrophobic cycle between their desktops and their professors’ desks.

1. INTRODUCTION

PEDANT: The Atlantic Canadian Poets’ Archive is an online source for poetry, critical analysis, and biographical information on the poets from the Atlantic Canadian region.

SKEPTIC: As with most things poetic or Atlantic Canadian, its roots lie in obscurity and aggravation.

ENTHUSIAST: In 2010-2011, the English Department of St. Thomas University—an undergraduate institution—offered an honours seminar called Atlantic Canadian Women Poets.

SKEPTIC: Participants in the seminar became increasingly frustrated by the lack of extended scholarship on any Atlantic Canadian poets.

PEDANT: Anthologies such as Words Out There and Coastlines had been published in the couple of decades prior to the course, but these sources offered only the poems, and in some cases brief biographies, interviews, and/or introductory essays.

ENTHUSIAST: There are also reviews and review articles in the periodical literature, and some unpublished dissertations.

PEDANT: However, there are few scholarly articles and no published book-length studies dedicated to the poetry of the region — no comprehensive analyses of recurring themes, no deep
considerations of the intersections between cultural and poetic production idiosyncratic to this region the way that, for example, Janice Kulyk Keefer’s *Under Eastern Eyes* provides a critical reading of Maritime fiction.

**ENTHUSIAST:** Thus, the Atlantic Canadian Poets’ Archive arose from students’ needs, and was expedited by students’ energy. Because students could not find what they needed, they set out to create and share it.

**SKEPTIC:** Participants in the seminar discussed potential formats, the logistics of administering the archive, and ways of funding it. All agreed that an online format was the best option.

**PEDANT:** They successfully applied for a federal SEED grant for the summer of 2011, and were able to hire a managing editor for ten weeks.

**ENTHUSIAST:** By the end of that first summer, the editors had collected scholarship on eight poets from six contributors, all of whom were participants in that honours seminar.

**PEDANT:** Since then, the ACPA has received internal grants from St. Thomas and another SEED grant, making it possible to post entries for nineteen poets, with another fifteen currently in process.

**SKEPTIC:** Most of the entries began as assignments for STU’s literature courses; others were contributed by students completely independent of the classroom.

**ENTHUSIAST:** One — the first of many, if the outreach efforts succeed — is from a student at UNB Saint John.

**PEDANT:** The official launch of the ACPA was held during the Annual Atlantic Undergraduate English Conference in March 2012.

**ENTHUSIAST:** The ACPA is now available to anyone in the world with a computer.

### 2. THE SITE (www.stu.ca/acpa)

**PEDANT:** Navigating the site is easy. Clicking on a poet’s name listed on the sidebar reveals the four elements which make up that poet’s entry:

- poem,
- critical analysis of that poem,
- a short biography, and
- a source list.

**ENTHUSIAST:** For example, the entry on Saint John poet Kay Smith actually includes not one, but three of her related short travel poems which chart a brief love affair: “Holland,” “Cologne,” and “Somewhere After Innsbruck.”

**SKEPTIC:** One of the main tasks of the editors has been obtaining copyright to put the poems on the website.

**ENTHUSIAST:** This is the octet of the sonnet from Smith’s poem “Cologne”:

> From the cathedral of dark lace  
> We walked, a little crowd of strangers  
> Window shopping in the night,  
> Each locked within his separate world,  
> Hedged in with laughter and the words we spoke,  
> When suddenly, you, of all most strange,  
> Were walking with a wild bird beating in your hand,  
> The sound of muffled thunder in the place between the words.

**PEDANT:** The critical analysis of “Cologne” was written by Allyson Groves, a participant in the original honours seminar and the
first Managing Editor of the ACPA. She writes:

*While on the surface the passion between the lovers is growing [over the three poems], Smith’s distinctive poetic voice reveals a nuanced narrative beneath, one which moves in opposition to a more explicit, traditional narrative. This dichotomy adds a layer to the poem that would go unnoticed had the poems not been read as a series; it would be impossible to detect such subtleties in individual poems.*

*It is only after her apprehension is expressed that Smith’s speaker conveys tangible lust or desire. Smith’s “Somewhere After Innsbruck” closes with a consummation of the relationship, as “your eyes look down / into my ferncool darkness / then / the sudden ascension in fire” (4-7). A mutual desire is acknowledged in these lines, foregoing emotional disconnects and anxiety in favour of connection, serving as a climax to the narrative Smith has constructed.*

**ENTHUSIAST:** The critical analyses are not reviews; they are scholarly close readings giving literary and social context.

**SKEPTIC:** Students are quite proud of these critical analyses, but they also worry that they’ll be exploited by plagiarists, which is another reason to draw the site to the attention of professors teaching Canadian literatures.

**ENTHUSIAST:** Each entry in the ACPA includes a short biography for the poet, and a live link to the poet’s entry in the *New Brunswick Literary Encyclopedia*, if there is one.

**PEDANT:** One of the most important aspects for researchers is each author’s Source List. In it, students have collected primary and secondary sources on each poet.

**ENTHUSIAST:** There is also a Master Sources page compiling all the poets’ sources, as well as some other, more general material.

**SKEPTIC:** The Links page provides contacts with on-line material related to the poets on the website, including writing associations, publishers, etc.

**PEDANT:** The Contact Us page includes the dedicated email address for the archive: acpa@stu.ca.

**SKEPTIC:** Periodically, while the site is between grants, it may take a few weeks to get a response to people’s queries about the archive.

**ENTHUSIAST:** There are also three PDFs on the Contact Us page. The first is our “Submission Guidelines.” Students from outside STU are encouraged to submit entries; the editors have been soliciting professors of Canadian poetry to design assignments around submitting an entry.

**SKEPTIC:** The “Frequently Asked Questions” PDF explains things like why more notable poets like Alden Nowlan or Rose Després are not on the site yet. (The answer is that the editors do not dictate who will be included – they can only edit and post the entries received from contributors.)

**PEDANT:** This leads to the third PDF, the “Compendium.” This is a list of poets who need entries. It contains nearly 250 names and continues to grow.
3. CAVEATS, KUDOS AND CONCLUSIONS

SKEPTIC: The ACPA is not peer-reviewed. Its contributors are undergraduates edited by undergraduates.

PEDANT: Thus, the ACPA provides a training ground toward more rigorous academic work.

ENTHUSIAST: It is quality work. Because the contributors and editors are in the process of getting their undergraduate degrees, they are extremely diligent.

SKEPTIC: They know their writing is going into a public forum and not just some Sisyphean loop between their desktop and a professor’s desk. They may not have a graduate’s breadth of knowledge, but they certainly have the depth where their chosen poets are concerned.

PEDANT: Contributors support the goals of the site, both as a proving ground for new scholars and as a way of propagating scholarship on Atlantic Canadian poetry in the public sphere.

ENTHUSIAST: And that philosophy of multi-functionalism is the whole basis of the ACPA. It is both a learning resource and a scholarly end-product. In that, it recognizes and takes advantage of a monumental, Copernican revolution in learning that is already well underway.

SKEPTIC: Sounds like a fad to me.

ENTHUSIAST: If you think it is a fad to understand that the earth moves around the sun, then yes.

PEDANT: In the last 25 years, I have gone from using a Dewey Decimal system card catalogue to on-line accessible databases not just of references but of full-texts. No one knows what research will look like in 25 more years; the ACPA is one, increasingly common model. Furthermore, the skills needed to produce a cogent entry for the ACPA — critical thinking, thesis building, writing, research — must be learned. The big difference between a conventional essay assignment and an ACPA entry is that the ACPA provides public access to students’ scholarship.

ENTHUSIAST: That means it provides important resources — particularly in the critical analyses and source lists — for people studying individual Atlantic Canadian poets, and the poetry of the region as a whole.

PEDANT: For me, this is the heart of the project; Atlantic Canadian poetry continues to be under-appreciated nationally within academe. In fact, a scholarly context in which to analyze it has yet to be fully developed. The ACPA contributes to building the basis for just such a conversation.

ENTHUSIAST: Until that is achieved, the ACPA is not only a helpful resource; it is a necessary one.

Acknowledgements

The authors would like to thank Nicholas Geldart for his assistance in editing this article and — along with Allyson Groves — for past and current work producing the ACPA.

References


ADDRESSING THE ISSUE OF CYBER-BULLYING WITH UNDERGRADUATE NURSING STUDENTS

Sheila Profit, Associate Professor of Nursing, Cape Breton University
Barbara Jamieson, Chair and Assistant Professor of Nursing, Cape Breton University

ABSTRACT

The Department of Nursing at a small university in the Atlantic region was asked to design an intervention to address the issue of cyber-bullying. After completing a literature review and conducting focus groups with the first-year nursing students, an intervention workshop based on a problem-solving framework was designed to focus on appropriate use of social media and the issue of cyber-bullying. Further activities to address the issue of cyber-bullying have been integrated into three years of the nursing curriculum. These interventions focus not only on prevention of cyber-bullying and helping people cope with the effects of cyber-bullying but also encourage the students to look at the development of programs on a university level to address this issue. Details of the interventions are discussed. As a result of these curriculum additions the nursing students learn not only about the issue of cyber-bullying and appropriate use of electronic communication but they also gain valuable nursing skills in the areas of group facilitation, communication, problem solving, conflict resolution, program development, and health promotion.

Examples of cyber-bullying amongst university students were reported to the Student Service Centre of an undergraduate university in Atlantic Canada. As members of the nursing faculty we were approached to develop an intervention to address this issue. It was decided that the initial target population would be first-year nursing students. An intervention was initially carried out with nursing students as a part of a first-year nursing course in the fall term of 2011. Since that time the issue of cyber-bullying has also been integrated into three other nursing courses.

Cyber-bullying is defined as “an individual or a group willfully using information and communication involving electronic technologies to facilitate deliberate and repeated harassment or threat to another individual or group by sending or posting cruel text and/or graphics using technological means” (Belsey, 2008, p. 18). There are several different types of bullying that can be done via the Internet. The most common include: cyber-stalking, flaming, exclusion or gossip groups, outing, and masquerading and impersonation (Haber & Daley, 2011; Hinduja & Patchin, 2007; Li, 2010). Examples of cyber-bullying amongst adolescents have received attention in the general news media and much of the discussion focusing on addressing this issue has been directed towards children in primary and secondary levels of school. Results of the 2009 Statistics Canada General Social Survey (Perrault, 2011) show 7% of Internet users aged 18 and over reported having been the victim of cyber-bullying with users of social networking sites and chat services being twice as likely to be victims. In addition, “Young adults, singles, homosexuals and persons with an activity limitation are at greater risk of being cyber-bullied” (Perrault, 2011, p. 7).

Cyber-bullying is a concern for the victim of the bullying, the person doing the bullying, and the bystanders who are witnessing the bullying. Distress leading to anxiety, sadness,
self-esteem issues, depression, and suicide as a result of having been cyber-bullied has been discussed in both mainstream news and in peer-reviewed literature (Patchin & Hinduja, 2010; Perren, Dooley, Shaw, & Cross, 2010; Schneider, O’Donnell, Stueve, & Coulter, 2012; Wang, Nansel, & Iannotti, 2011). In a sample of 579 persons, 56.1% of participants felt anxiety in response to being targeted online. In 79.3% of cases the bully was unknown to the victim (Turan, Polat, Karapirli, Uysal, & Turan, 2011). Hinduja and Patchin (2007) found online strain endured by the victims of cyber-bullying may have contributed to offline problems and delinquency such as drinking alcohol (33.6%), cheating on school tests (29.7%), unexcused absenteeism (24.3%), peer assaults (18.4%), damage to property (13%), and shoplifting (7.9%). Wang et al. (2011) also found that bullies appeared to have higher levels of depression than those without cyber-bullying experiences; however, victims of cyber-bullying reported higher levels of depression than the bullies.

Several studies have found motivations for bullying behaviours. The absence of face-to-face encounters allows for invisibility and anonymity. Bullies are less likely to witness the effect their behaviour has on the victims and are less likely to show compassion or feel remorse (Haber & Daley, 2011; Slonje & Smith, 2008; Turan et al., 2011). Varjas, Talley, Meyers, Parris, and Cutts (2010) found that internal motivations for bullying were the emotional state of the bullies, such as boredom, disinhibition effect, revenge-seeking, and redirecting feelings. The external motivations were environmental factors, such as the situation or characteristics of the victims.

In two studies of undergraduate university students in the United States, the majority of students knew someone who had been cyber-bullied (MacDonald & Roberts-Pittman, 2010; Walker, Sockman, & Koehn, 2011). The specific media used to target students was found to be social networking sites (25%), text messages (21.2%), emails (16.1%), instant messages (9.9%), and chat rooms (6.8%). There is very little research on the effect of cyber-bullying on the bystanders who witness the abuse. In a study of high school students, Li (2010) found that if bystanders were present, they were likely to watch but not join in (70.2%). The majority of students (63.9%) felt the impetus for cyber-bullying was to have fun.

Cooper et al. (2009) examined the types of bullying behaviours encountered by nursing students in classroom or clinical settings within the past year. The most significant forms were inappropriate, rude, or aggressive behaviour; the use of cursing and profanity; belittling or humiliating behaviour as well as yelling and shouting. Threats or acts of physical harm along with verbal hostility were not frequently experienced. Thirty-four percent of students did nothing in response to the bullying behaviours. When asked what resources their school of nursing had to cope with bullying, over 75% did not have a response for this question.

Graduate nurses also encounter bullying. Laschinger, Grau, Finegan, and Wilk (2010) examined experiences graduate nurses had regarding burnout and bullying in the workplace. They found that 33% of new graduates, working less than three years, were bullied. Workplace bullying is a serious issue for the nursing profession that has consequences for both the individual nurses and the patients (Johnson, 2009). Electronic communication is increasingly being used by nurses inside and outside the healthcare setting and poses another means for bullying.

Interventions for Cyber-Bullying

Cyber-bullying is a relatively new phenomenon and little research has been done to explore effective interventions that address the issue with university student populations. Many of the interventions to address cyber-bullying have focused on the development of policies and procedures regarding the manner in which cases are reported, recorded, and managed.
One intervention used in the United Kingdom is the Quality Circle approach which “allows explorative analysis of cyber-bullying in school settings by identifying issues for further consideration” (Paul, Smith, & Blumberg, 2010, p. 157). Students and facilitators work together to problem-solve for anti-bullying campaigns. This allows students to take an active role in the prevention of bullying. Marczak and Coyne (2010) identify five ways to combat cyber-bullying within school systems: generating awareness about cyber-bullying, creating comprehensive policies and practices, alleviating stressors related to reporting incidences, endorsing the positive use of technology, and evaluating the effectiveness of current anti-bullying policies and procedures.

### Intervention with Nursing Students

Our proposal focused on developing an intervention regarding cyber-bullying with first-year nursing students. An underlying principle of the proposal was the development of student capacity to work as professionals in the promotion of health. The main focus of the intervention was to generate awareness of the issues surrounding cyber-bullying and to brainstorm with students about strategies to address cyber-bullying. Funding was received from the university Student Services Centre to hire a fourth-year nursing student to do a literature review on cyber-bullying. Because the use of the Internet and social media is continually evolving it was decided that we would do focus groups with the first-year students. This would supplement the literature review with current information and a local perspective. Student Services requested that the university clinical social worker help with these focus groups so that capacity to do this kind of work would be developed within Student Services. Ethics approval was obtained from the university research ethics department.

We held focus groups with all first-year students who consented to participate in the groups. Four focus groups were held. Prior to each focus group, we informed the students about resources available to them if they were to become upset from the focus group. This was to address the concern that questions in the focus group may trigger difficult memories for the students. The questions for the focus group centred on the students’ use of electronic communication; how they defined cyber-bullying; their examples of cyber-bullying; their perception of the effects of cyber-bullying on the person being cyber-bullied, the person doing the cyber-bullying, and bystanders to the cyber-bullying; and what they thought a university student should do if being cyber-bullied.

The information obtained from the focus groups supported the literature review. Social media and cell phones were the predominant form of communication. Students did volunteer many examples of cyber-bullying activity that had happened to themselves personally or that they had witnessed happening to others.

Two months after the focus groups, a problem-solving session to address cyber-bullying was held with each first-year class. All students were expected to attend these sessions as they were a required part of the communication lab of the nursing course. This session focused on the appropriate use of electronic communication and the potential role for the students as health professionals in addressing cyber-bullying. Small-group format was used for each session with each group designating a facilitator, timekeeper, and note taker. Each group was given questions to address in a specific amount of time. Towards the end of the session each group reported back to the larger group. Supplementary reading from the nursing regulatory bodies on the use of social media and the Canadian Nurses Association Code of Ethics (2008) was assigned to the students for follow-up reading.

As a follow-up to this intervention, we have introduced theory on cyber-bullying and its effects into the nursing course, Health Promotion and Learning, in the winter term of
the first year of the nursing program. In the second year of the program a group project has been integrated into the nursing practice component of the Community Health Nursing course. Some of these students are doing problem-solving groups focusing on the issue of cyber-bullying with non-nursing university students. The purpose of this activity is to increase awareness and strengthen community action around this issue and to also increase the students’ skill with facilitating groups. All students in the course take part in a planning session on developing a university-wide program to address the issue of cyber-bullying based on the Ottawa Charter Health Promotion Strategies: developing public policy, strengthening community action, creating supportive environments, developing personal skills, and reorienting health services (World Health Organization, 1986). In the third year of the nursing program interventions for dealing with the effects of cyber-bullying have been integrated into the Psychiatric-Mental Health Nursing course.

As a result of these interventions the issue of cyber-bullying and appropriate use of electronic communication has been integrated into three years of the nursing program curriculum. Students learn to address the issue at a prevention level and also at the intervention level of helping people cope with the effects of cyber-bullying. These additions not only focus on prevention and coping on an individual level but also encourage the students to start looking at the development of programs to address cyber-bullying on a population level. As a result of the nursing projects the issue of cyber-bullying is also being discussed with non-nursing university students in an attempt to strengthen community action around this issue. Throughout this process the nursing students are not only learning about cyber-bullying but also gaining valuable skills in the areas of group facilitation, communication, problem solving, conflict resolution, program development, and health promotion.

References


---

**Sheila Profit**, BSCN, MAEd, RN, Associate Professor, Department of Nursing, Cape Breton University, has several years’ experience in health promotion, mental health, administration, and education. Her research interests are in the areas of resiliency, mental health and health promotion.

**Barbara Jamieson**, MN, RN, Chair and Assistant Professor, Department of Nursing, Cape Breton University, has taught in all four years of the program and her academic interests include healthy workplace issues and the use of technology in nursing and nursing education.
ON THICK ICE: A FRAMEWORK FOR ASSESSMENT & FEEDBACK

Heather Sparling, Department of History & Culture, Cape Breton University

ABSTRACT

I see assessment and feedback as a conversation between teacher and student. Indeed, there are few other opportunities for students to receive as much (potentially) detailed, personalized commentary from the teacher on his or her work as in the feedback a student receives on an assignment. And yet assessment and feedback are areas of teaching fraught with anxieties: how can we convey what a student needs to do to improve without being overwhelming or crushing? how do we ensure fairness in our grading? how do we get through the marking as quickly as possible so that we can turn to other matters requiring our attention? In this paper, I introduce a framework that I use in several key areas of my teaching, including design of assessments, classes and even whole courses, as well as when developing assignment feedback for students. “ICE” stands for Ideas-Connections-Extensions and comes from a model of teaching assessment developed by Queen’s University education scholars Robert Wilson and Sue Fostaty Young. In this article, I introduce the ICE framework and demonstrate how it can be used to develop appropriate assessment criteria that students can use when preparing an assignment and which faculty can use to guide grading and feedback. Although I apply this framework within an arts context, it is applicable to other disciplines as well, including business, the sciences, health, and technology, as well as to course design.

Introduction

This paper is about an approach to assessment that I discovered while working in the Instructional Development Centre (now the Centre for Teaching and Learning) at Queen’s University in Ontario. A PhD candidate there who became a colleague and mentor, Sue Fostaty-Young, had co-authored Assessment & Learning: The ICE Approach (Fostaty-Young and Wilson 2000). This approach has transformed not just my thinking about assessment – which it has – but it now underlies almost everything I do as a teacher, and has done so for more than seven years now. I use this framework to help me determine the suitability of a potential course reading, plan and evaluate class discussions, and design assessment, as well as to grade them and to provide feedback. In this article, I will focus on assessment and rubrics in particular. ICE is a compelling framework because it allows me to assess each student in relation to his or her own starting point. It also focuses on student development, guiding students to the next level of accomplishment. This is much more effective than asking a D student or a failing student to aim for an A, which is implicit in many grading schemes. That is not a realistic approach, and it becomes frustrating for student and teacher alike. The ICE framework can be used for formal or informal assessment, and for formative assessment (providing feedback to both the instructor and students for improvement) and for summative assessment (measuring the success obtained by a student at the end of a unit or course). Although the book is really aimed at elementary and secondary education, the ICE framework is applicable across all educational levels (including tertiary) and beyond. It is also applicable across subject areas. While I am an ethnomusicologist and have applied this framework to the arts, I have worked with faculty in other disciplines to help
them to imagine how it could be applied in their own areas, whether in business, science, technology, or health. I suggest some ways that this could be done towards the end of this paper. What I particularly value about the ICE framework is that it helps me articulate to students what I had previously struggled to articulate; I could sense what the problems were with assignments and I knew what had to be done to improve them, but I didn’t always know how to explain this to a student. The ICE framework has really helped in this regard.

**What is ICE?**

ICE stands for Ideas, Connections, and Extensions (Fostaty-Young and Wilson 2000). Ideas are the basic facts within a course or discipline. They can include fundamental concepts, vocabulary and definitions, descriptions, names and dates, etc. These are the things that students can look up online or in a course text; they are things easily memorized. More developed thinking or analysis cannot be achieved without first mastering these Ideas. The Ideas are foundational. In my courses, students who demonstrate an understanding and knowledge of Ideas earn a C grade – and that’s an essential achievement!

Connections are the linkages that we and our students make within our courses and disciplines. These connections could be, for example, between concepts, between course readings, between courses, between units, between time periods. But they can also be between the course and the student’s life experience or with previous knowledge. Connections are also illustrated when applying a concept to a particular context. In a research paper, Connections are made when students cite sources to support their claims. Obviously, Connections cannot happen without a mastery of Ideas. So students who demonstrate the ability to make appropriate Connections earn a B grade.

Extensions refer to one’s ability to go beyond what has been read or explained in order to come to a new understanding of the material. These are a student’s “aha!” moments. Perhaps a student uses a concept in a novel way. This “novel way” doesn’t have to be novel to the whole world; it just has to be clear that the student did not come to this new way of thinking by hearing about it somewhere else. Rather, the student figures it out for him- or herself; it’s novel to the student. Extensions emerge when students begin grappling with hypothetical questions such as, “what does this mean?” or “how does this shape my view of the world?” They emerge when students can begin critically evaluating an Idea or a Connection, noticing, perhaps, that it may work in one context but not in another, or noting that it would work better with a particular modification. Extensions demonstrate advanced critical thinking skills, and they earn a student an A grade.

In Wilson and Fostaty-Young’s book, they give the example of a broken toaster. Those who can identify which parts are broken have mastered Ideas. Those who not only identify which parts are broken but how those parts are affecting the operations of the toaster have mastered Connections. And those who can identify not only which parts are broken and how they affect the toaster’s operations, but can also explain how to fix the toaster have mastered Extensions (2000, p. 53-4).

**Rubrics**

Rubrics are charts that identify the criteria that will be used to evaluate an assignment, as well as the quality achieved for each criterion. A rubric may be defined as “a document that articulates the expectations for an assignment by listing the criteria or what counts, and describing levels of quality” (Reddy & Andrade, 2010, p. 435). There are three basic features of a rubric: 1) evaluation criteria (the criteria the teacher will use when evaluating an assignment); 2) quality definitions for each criterion (these are the “gradation” that a teacher may encounter within each criterion,
such as “acceptable” to “excellent”); and 3) a scoring strategy (the weight given to each criterion within an overall grade) (Popham, 1997; Reddy and Andrade, 2010).

Rubrics are commonly used in elementary and secondary education but less so in post-secondary education, although there are a number of educational scholars who study them and advocate for them at this level too (Montgomery, 2002; Bolton, 2006; Schneider, 2006; Reddy & Andrade, 2010). For teachers, rubrics help to ensure consistent evaluation across students, and they also help to identify areas for feedback. If rubrics are handed out to students ahead of time, which is generally advised, then students will have a better sense of how to focus their attention and be able to prioritize tasks in preparing for an assignment. The rubric can also help a student to interpret feedback and grades (Arter & McTighe, 2001; Stiggins, 2001; Reddy & Andrade, 2010).

In their review of 20 studies of rubrics in higher education, Reddy and Andrade found that both undergraduate and graduate students generally like rubrics because “they clarify the targets for their work, allow them to regulate their progress and make grades or marks transparent and fair” (2010, p. 438). But students are far more likely to consider a rubric useful when it is provided along with assignment instructions, rather than provided only when the grade is returned (Schneider, 2006). In general, studies suggest that rubrics result in higher achievements and deeper learning for students in higher education (Reddy & Andrade, 2010, pp. 439-440).

Although many faculty find that rubrics help them to evaluate student work quickly and consistently, some resist using them. Reddy and Andrade speculate that this may have to do with the limited perceptions some faculty have regarding rubrics: those who view rubrics as exclusively evaluative in function may not want to use them as much as faculty who see their value as a teaching and learning tool (2010, p. 439). I would suggest that some might resist rubrics because they are most familiar with quantitative rubrics that identify “perfection” as the goal, something not attainable for the majority of students. ICE offers a more qualitative approach.

Traditional rubrics often focus on quantitative results. So, for example, if spelling is a criterion for evaluation, then an A would represent, say, 0-3 errors, a B would represent 4-6 errors, a C would represent 7-9 errors, and a D would represent 10+ errors. Another similar and common approach is to evaluate a criterion based on whether “all,” “some,” “a few” or “none” of a particular element (such as component parts, technical vocabulary, or steps in a process) is present. The focus in both is obviously on quantity, not quality. In these contexts, more is better.

Before I discovered ICE, I used a variation of the quantitative rubric. I would start by defining the perfect assignment (10/10) and then I identified the kinds of omissions or imperfections that would lead to a lower grade. So some combination of errors or omissions X, Y and Z would result in an 8/10 while even more errors and omissions, including A, B and C, would result in a 6/10. But the focus here is really on what the student has not done rather than on what the student has actually achieved. This is demoralizing. It also suggests that perfection is the goal, but this isn’t necessarily a realistic goal for some students, particularly those operating at a lower grade level. For many students, success really involves achieving the next letter grade on the grading ladder. I also felt that this kind of quantitative grading was “wishy-washy,” since I could never say exactly which errors, and how many, would result in which letter grade. I could only say that “some combination” of a bunch of possible errors would result in various letter grades. Writing response scholar Chris Anson might argue, using Perry’s “Forms of Intellectual and Ethical Development” scheme, that my grading scheme reflected a dualistic instructional ideology, one in which there were right and wrong answers (1989).
ICE, by contrast, provides a means of offering a positive assessment of the assignment’s strengths. It moves the instructor towards more relativistic and reflective feedback (Anson 1989) and focuses on what the student has achieved, whether Ideas, Connections, or Extensions. Once a student sees where he or she falls on the ICE framework, s/he knows what needs to be done to move to the next ICE level. If a student is operating at the Ideas level, for example, s/he should focus on developing Connections without worrying about Extensions. The purpose is to help the student to identify reasonable and achievable goals for future work and to provide a manageable path towards Extensions-level thinking. I will often explicitly tell my students this in feedback.

Sample Rubric: Developing Criteria

I’ve developed an ICE rubric for a project in a course called “Introduction to Gaelic Song” (see Appendix A). For this project, students create a compilation CD of songs introducing Gaelic song to the next year’s class. They have to write liner notes (the little “booklet” that accompanies many CDs), including an introductory essay, explaining their selections and providing a context in which to understand individual Gaelic songs. I’ve divided my rubrics into three major components: content, bibliography/research, and “style.” I can assign each component a different weight in the overall grade. For example, I might make content 70% of the grade, the bibliography worth 20% and style worth 10%.

Within each component, I have identified a number of criteria on which to evaluate an assignment. I’ve identified Ideas, Connections and Extensions for each criterion. Note that you do not need to have all levels of ICE for every single criterion. For example, in the bibliography section of my rubric, I do not provide an Extensions component for the referencing styles criterion. For my purposes, if the student has mastered the basics of citing conventions, that’s Ideas. If they show a more advanced or nuanced understanding of citing conventions (by, for example, citing an encyclopedia entry or personal interview properly), that’s a demonstration of Connections. But I don’t really see that this component of an assignment is likely to elicit Extensions-level thinking.

To be honest, it took me quite a while initially to create this rubric. It was not necessarily difficult to decide on the evaluative criteria on which to assess my students’ work since I was already using criteria when marking. Indeed, when a student myself, I had absorbed the criteria (often discipline-specific) on which my work was being evaluated. What was more difficult was shifting from a quasi-quantitative “what is lacking” model to the ICE framework. It took me a long time to develop the quality definitions for each criterion, using ICE. Popham has warned that many rubrics either use excessively general definitions, or provide dysfunctional detail (1997). I was initially encouraged to limit my rubric to a single page but I felt that this would result either in quality definitions that were too general or too few criteria for my purposes. However, I did limit my rubric to two pages even though it would have been easy to make it three or four. I wanted to balance the need to provide adequate detail with the reality that students would simply ignore a rubric that was too long.

One way to speed up the process of developing a rubric, of course, is to modify existing ones. This is, in part, why I have provided my own rubric in an appendix to this article. Readers are welcome to adapt my rubric in any way that would be useful. Alternatively, an online search – which can be discipline-specific – for rubrics will yield hundreds of exemplars, although not necessarily using the ICE framework. However, these may provide examples of criteria on which to evaluate an assignment, and perhaps even some ideas for quality definitions, although these may need to be transformed into statements about Ideas, Connections and Extensions.
Potential Issues

Despite our best efforts to anticipate all potential issues when developing something for a course, whether a lecture, an assignment, or a rubric, it is often the case that we discover its imperfections only in its use. In using a rubric for the first time, you will likely quickly realize whether additional criteria are required, whether particular criteria are less relevant than you had thought, whether two or more criteria could be reasonably merged, and whether the quality definitions for each criterion are adequate or need to be revised. When I first developed my rubric, I had a separate component for “essay structure” which included criteria for an introductory sentence, a concluding paragraph, paragraphs on topic, and organization of paragraphs. However, as I used it, I realized that by having separate criteria for the opening sentence and closing paragraphs, I was giving these relatively minor elements the same weight as those elements that I thought were far more important, such as the organization of the paragraphs or the appropriate use of course terminology. So I wound up dropping the opening and closing paragraph criteria and merging the others into the “content” component of my rubric.

Grading & Feedback

Since I provide the rubric to students with the assignment instructions, I use a simple chart to identify what students have achieved for each criterion (see Appendix B). Although it would be entirely feasible to integrate feedback directly into the rubric chart in Appendix A, and some might argue that this would ensure that students would make the connection between expectations and feedback, I prefer the chart for its simplicity and clarity, and because I want to avoid overwhelming students with too many words and pages. When I’m marking, I usually find it quite easy to identify whether a student is working at an Ideas, Connections or Extensions level for each criterion. I will even locate the check mark in each box in a different place (to the left, middle, or right) to show whether the student is close to achieving another level, or whether the student really has some more work to do on the level of achievement before being ready to move on. I do not hesitate to mark an X, rather than a check mark, if I feel that a student has not addressed a particular criterion at all.

How do I convert all these check marks into a grade, especially if the student is achieving different levels of ICE for different criteria? For me, it has been important to avoid equating each box on the chart with a point value, a potentially problematic approach flagged by Mertler (2001). Instead, within each component of my rubric, I look at the overall pattern of check marks. I assign a grade for that section based on the overall level at which the student is working. Indeed, I hope that students will have check marks at all levels at ICE so they can take pride in areas of excellence while identifying areas for further attention on subsequent assignments.

As anyone who has taught long enough knows, at some point a student will submit an assignment that is just different. It may be excellent, but if it is evaluated using the established rubric, the resulting grade would not reflect the actual achievements demonstrated in the assignment. For me, it has been important to recognize that, in the end, I need to rely on my own instincts, experience, and expertise when marking such assignments. If the grading table suggests one grade but I think it deserves another, I will go with the grade I think is appropriate. In other words, the rubric does not dictate my marking; rather, the rubric is a tool for evaluation. If the tool doesn’t work, then I won’t use it. At the same time, it forces me to ask myself why I think the student deserves a different grade, and that is useful both for justifying the grade and for developing useful feedback for the student.
My grading form also has a comments section so that I can write some qualitative feedback. I type all my feedback, partly because I’m a much faster typist than hand-writer at this point (and I also therefore provide way more feedback when I type than when I write), but also because it means that I have a record of how a student did on one assignment when it comes to evaluating a subsequent assignment. I can see whether a student heeded my advice, or whether s/he is repeating errors.

The ICE rubric makes it easy for me to formulate feedback, since I can see exactly where the student has excelled and where the student needs to do some work. I can start my comments with an acknowledgement of what the student has achieved and then offer constructive criticism to help the student improve. I might start with explaining why, for example, I believe a student is close to expressing Extensions-level thinking when working with course concepts but needs to start thinking of research and the incorporation of secondary sources in more creative ways. Nancy Sommers, who studies written feedback on university- and college-level assignments, argues that the best feedback incorporates both praise and constructive criticism and, more importantly, it treats students as apprentice writers and junior colleagues (Sommers 1982, 2006). In other words, feedback is most effective when it is respectful and when students believe that the teacher recognizes their thinking and writing potential. However, note that Smith warns teachers to avoid feedback conventions that may result in students disregarding feedback altogether (1997). The ICE rubric, with its focus on development and achievement, offers a respectful way of identifying a student’s strengths and areas for improvement while providing the teacher with a jumping-off point for formulating feedback tailored to particular students and particular assignments.

Because I include a description of the ICE framework in my course syllabi, talk about ICE in class (pointing out Ideas, Connections and Extensions in the readings students complete, in their questions and responses, and in my lectures), and because I evaluate every assignment using the ICE framework, I do not always feel the need to provide such an extensive rubric. Simply identifying the elements of ICE apparent in an assignment can operate as a kind of simple rubric. I tend to use the complex rubric in Appendix A for major assignments and have experimented with my grading and feedback forms for smaller assignments. For example, in response to a short “listening log” assignment, for which students analyze a piece of music of their choice and analyze it using course concepts and materials, I use a simpler feedback form. For this latter assignment, I simply use the headings “Ideas,” “Connections,” “Extensions,” and “Technical,” with some space at the bottom for a grade and additional comments. Under each heading, I identify examples of Ideas, Connections, and Extensions in the assignment. Under “technical,” I note any technical matters (did the student include all the required components of the assignment? are there writing errors?). I then make some brief comments in response to the elements I’ve identified. Students can quickly see concrete and specific examples of ICE in their assignments, which ideally validate their accomplishments, reinforce the ICE framework in their minds, and give them a sense of the level at which they’re operating. My feedback focuses on one or two matters to prioritize for future assignments, and asks them to engage with “juicy issues” from the course as a means of extending their critical thinking and writing at the Extensions level.

Other Disciplines

Since I’m writing from an arts background and perspective, I realize it can be difficult for those in completely different disciplines, such as the sciences or business, to see how ICE might apply to them. Here I suggest some ways to use ICE in other disciplines. Please remember that I am
not an expert in any of these disciplines and I apologize if I have not demonstrated a good understanding of a typical assignment in any of them (perhaps I haven’t achieved the Ideas level in any of them!). I offer these suggestions only in the hopes that they will inspire readers to see how ICE might apply to their own teaching contexts.

Nursing

When working in the clinic, did the student appropriately identify the health issues of a patient (Ideas)? Did the student ask the patient the correct questions (Ideas)? Did the student make appropriate connections between observable conditions or symptoms and a potential health issue (Connections)? Did the student recognize that what s/he observed in one patient is similar (or different) in another patient (Connections)? Did the student identify how particular conditions (whether in the hospital, clinic, or patient’s home or place of work, as revealed by the patient) might have an impact on the patient’s health (Connections)? Did the student recognize multiple possible issues and potential directions for treatment based on the information received (Extensions)? Did the student identify not only a variety of possible treatments, but the possible pros and cons specific to the particular patient in question (Extensions)? Did the student question the information received, such as a patient’s comment that was not consistent with observable symptoms (Extensions)?

Mathematical Formula

In numerous math and science disciplines, students are required to work with formulae. Even if the student got the answer wrong, did s/he demonstrate a basic understanding of the formula being taught (Ideas)? In other words, did the student use the appropriate formula but perhaps use the wrong variables, or put the variables in the wrong places? Did the student demonstrate an awareness of how a formula relates to a particular problem (Connections)? Did the student demonstrate that s/he was making appropriate connections between one part of a formula and another, or between formulae, or between a formula and a concrete situation (Connections)? Did the student achieve the correct answer (Extensions)? Was the student able to manipulate a formula appropriately to respond to different situations (Extensions)?

Science Lab

Did the student identify an appropriate hypothesis and conduct an appropriate experiment to test it (Ideas)? Did the student demonstrate an awareness of how previous lab experiments relate to the current one (Connections)? If the student was not successful in his or her experiment, was s/he able to identify what went wrong and why (Connections)? Was the student able to suggest ways to modify the experiment so that results would be more accurate or easier to achieve (Extensions)? Was the student able to suggest limitations with the experiment or identify areas for future analysis (Extensions)?

Business

In a business case study, did the student identify the key issues (Ideas)? Did the student apply course concepts to the case study appropriately, or make appropriate linkages between different case studies or scenarios (Connections)? Did the student extend a concept from the course or critique it appropriately (Extensions)?

Conclusions: Using ICE Beyond Assessment & Feedback

In this short paper, I have defined ICE and explained how I use it for rubrics and feedback in my ethnomusicology courses, and I have also suggested ways that it could be applied in other disciplines. As I mentioned in the introduction,
however, ICE has impacted my teaching far beyond these aspects. For example, when designing a final exam, I will consider whether I have a balance of questions that encourage answers at each level of ICE. Definitions, for example, are generally Ideas questions. Multiple choice questions (MCQs), depending on how they are formulated, could be geared for Ideas or Connections (I suspect that Extensions would be difficult to achieve in MCQs, although perhaps not impossible). Moreover, I will try to set my exams so that they predominantly consist of questions that allow students to operate at whichever level of ICE they are currently mastering. Essay questions, for example, allow students to demonstrate Ideas, Connections, and/or Extensions. They thus allow students to demonstrate their abilities, whatever those may be.

I will also use ICE when designing classes, working to ensure that there is a balance between the introduction of basic concepts (Ideas), linking new concepts with previous ones, or linking new concepts with examples (Connections), and discussion questions that encourage students to work through new concepts by questioning their use and limitations (Extensions). It is also conceivable that the ICE framework could be used in designing or reviewing whole programs (see, for example, the scholarship on the use of rubrics in program evaluations: Dunbar, Brooks, & Kubicka-Miller, 2006; Knight, 2006). Not only does ICE influence everything that I do in my own courses, but my hope is that students use the ICE framework to approach not just my course, but their other courses (Connections!). ICE should be usable within any learning context. Indeed, if students can begin monitoring and assessing their own awareness and achievement of Ideas, Connections, and Extensions, there could be no better outcome.

Acknowledgements

I would like to thank Sue Fostaty-Young for introducing me to the ICE framework, and for inspiring me to use it. I would also like to extend my appreciation to the staff and faculty at Queen’s University’s Centre for Teaching and Learning, who provided me with incomparable opportunities to grow as a teacher. I am especially grateful to the peer reviewer who directed me to writing response scholars Anson and Sommers. Finally, warm thanks to Eileen Smith-Piovesan at CBU’s Teaching and Learning Centre, who has been unflaggingly supportive of my teaching and teaching approaches.

References


---

**Heather Sparling**

Heather Sparling is Associate Professor of Ethnomusicology at Cape Breton University, and also Chair of the Department of History & Culture. Prior to coming to CBU, she worked in educational development at York and Queen’s Universities.
Appendix A

ICE Rubric for Gaelic Song Assignment

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>Ideas</th>
<th>Connections</th>
<th>Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic &amp; Development</td>
<td>• essay focuses on broad topic relevant to course</td>
<td>• essay focuses on well-defined topic</td>
<td>• essay focuses on innovative, creative, unexpected topic</td>
</tr>
<tr>
<td></td>
<td>• essay remains on topic throughout</td>
<td>• several well-defined and relevant aspects of topic explored</td>
<td>• tightly focused topic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• topic addressed in detailed and nuanced manner</td>
</tr>
<tr>
<td>Essay Structure</td>
<td>• each paragraph makes single point relating to topic</td>
<td>• logical progression</td>
<td>• points build on one another</td>
</tr>
<tr>
<td></td>
<td>• introduction is relevant but general</td>
<td>• each paragraph explicitly explains how the paragraph relates to and develops the essay topic</td>
<td>• many aspects of a single point are analysed and detailed</td>
</tr>
<tr>
<td></td>
<td>• conclusion restates essay topic and summarizes main points</td>
<td>• introduction is tightly focused on topic</td>
<td>• intro uses rhetorical devices to get reader to think of topic in a particular way</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• conclusion summarizes how essay went from point A (opening topic) to point B (final argument/point)</td>
<td>• conclusion suggests future areas of research, identifies gaps in existing knowledge, and/or suggests implications of research beyond essay</td>
</tr>
<tr>
<td>Integration of Research</td>
<td>• research is understood as evidenced by paraphrasing and citations</td>
<td>• connections between research sources</td>
<td>• research is critically assessed (weaknesses and/or possible modifications identified)</td>
</tr>
<tr>
<td></td>
<td>• research used relates to thesis</td>
<td>• research applied to new contexts (such as essay focus)</td>
<td></td>
</tr>
<tr>
<td>Independent Thought</td>
<td>• personal opinion expressed</td>
<td>• personal opinion supported by research</td>
<td>• analysis and/or conclusions reveal a unique perspective not seen elsewhere in the course</td>
</tr>
<tr>
<td></td>
<td>• one perspective/position is taken</td>
<td>• one perspective/position is taken but with acknowledgement of other perspectives/positions</td>
<td>• use of new, personal, unique evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• acknowledgement of “shades of gray”</td>
</tr>
<tr>
<td>Course Concepts</td>
<td>• references made to course concept(s)</td>
<td>• references to course concepts demonstrate an understanding of their complexity</td>
<td>• course concept(s) critically assessed</td>
</tr>
<tr>
<td></td>
<td>• course concept(s) understood as evidenced by their appropriate use</td>
<td>• detailed and/or extended use of particular course concepts</td>
<td>• use of multiple course concepts to examine many facets of an issue</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• a single course concept is explored and analysed in detail</td>
</tr>
<tr>
<td><strong>CONTENT (continued)</strong></td>
<td><strong>Ideas</strong></td>
<td><strong>Connections</strong></td>
<td><strong>Extensions</strong></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>---------------</td>
</tr>
</tbody>
</table>
| **Music**               | • use of appropriate music vocabulary | • references to specific tracks on the compilation CD to demonstrate understanding of research and/or to illustrate points related to thesis | • specific tracks on the compilation CD are analysed (not just referenced) in the essay  
|                         | • essay makes explicit references to specific tracks on the compilation CD  
|                         | • consistent focus on music throughout essay | | extended/detailed musical analysis  
|                         | | | specific tracks used as jumping off points for discussion, rather than simply as examples of points being made |
| **BIBLIO & RESEARCH**   | **Ideas** | **Connections** | **Extensions** |
| **Research Materials**  | • materials are relevant to thesis  
|                         | • range of resource types | • emphasis on scholarly research  
|                         | | • emphasis on current research  
|                         | | • demonstration that a particular area has been thoroughly/completely researched | • research drawn from beyond the immediate focus of the essay (e.g., from another discipline or research pertaining to something indirectly related to the subject of the essay) |
| **Citations**           | • others’ words and ideas acknowledged  
|                         | • consistent and appropriate format  
|                         | • always includes specific page references | • paraphrasing present  
|                         | | • direct quotations are explained and related explicitly to topic | • ability to refer to others’ ideas explicitly but without disrupting the flow of the essay |
| **Bibliography**        | • bibliography provided and formatted appropriately  
|                         | • all in-text citations referenced in bibliography  
|                         | • only resources cited in essay are included | • application of appropriate bibliographic format to non-book, non-journal references (e.g., encyclopaedias, essays in books) | |
| **STYLE**               | **Ideas** | **Connections** | **Extensions** |
| **Spelling & Punctuation** | • spelling is correct | • mastery of basic punctuation (e.g., commas, apostrophes) | • mastery of sophisticated punctuation (e.g., dash, semi-colon, colon) |
| **Sentences & Grammar** | • simple, correct sentences (subject-verb-object) | • variety of sentence structures and lengths | • complex sentences clearly structured  
|                         | | | sentence structure used for rhetorical effect |
| **Vocabulary**          | • basic | • variety of vocabulary used appropriately | • vocabulary selected to articulate shades of meaning |
# APPENDIX B

## ICE Grading & Feedback Form

**STUDENT NAME:**

**MARK:** /25

<table>
<thead>
<tr>
<th>CONTENT</th>
<th>/15</th>
<th>Ideas</th>
<th>Connections</th>
<th>Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic &amp; Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Essay Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration of Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Thought</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Concepts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIBLIOGRAPHY &amp; RESEARCH</th>
<th>/5</th>
<th>Ideas</th>
<th>Connections</th>
<th>Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bibliography</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STYLE</th>
<th>/5</th>
<th>Ideas</th>
<th>Connections</th>
<th>Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spelling &amp; Punctuation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentences &amp; Grammar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMMENTS**
FACILITATING EFFECTIVE WHOLE-CLASS DISCUSSIONS: STRATEGIES FOR SCIENCE EDUCATORS

Dr. Grant Williams, School of Education, St. Thomas University

ABSTRACT

Many of the topics that students encounter in their study of science require them to navigate abstract and conceptually challenging ideas. Based on research of the discussion-leading practices of a group of experienced high school physics educators teaching the concept of circuit electricity, this paper presents a sampling of conversational strategies that are believed to go beyond previously identified dialogical tactics and support student reasoning at a higher cognitive model construction level. The paper utilizes examples from classroom discussion transcripts to describe the roles that these teaching strategies are hypothesized to play in students’ construction, evaluation, and revision of explanatory models for abstract scientific concepts. The article describes a seven-step process that introduces pre-service secondary science teachers to effective techniques for leading discussions.

Introduction

Whether it be elementary school or graduate school, many of the topics that students encounter in their study of science require them to navigate abstract and conceptually challenging ideas (Keeley, Eberle, & Farrin, 2005; Koba & Mitchell, 2011). This may be because the phenomena involved occur on scales that are either too large or too small to be readily observed (e.g., galaxies and atoms), occur at rates that are either too fast or too slow to be witnessed (e.g., light travel and continental drift), or occur in hidden situations (e.g., electric circuits and the human circulatory system). Science educators at all levels are charged with finding ways to make these conceptually challenging ideas accessible to students in a manner that facilitates the development of cogent and fruitful understanding.

Based largely on the work of Vygotsky (1962), educational research has begun to understand the impact of classroom discussions as a means for facilitating the construction of scientific knowledge. Research by Hammer (1995), Roth (1996), van Zee and Minstrell (1997), Hogan and Pressley (1997), and Chin (2007) has identified some key elements for leading whole-class discussions and the impact of particular strategies on student engagement. These include participating mainly as a facilitator in the discussion, restating or summarizing student statements, asking for elaboration and clarification, redirecting questions back to students rather than providing answers, focusing attention on conflicts and differences of opinion, inviting responses to other students’ statements, and choosing to not directly challenge “incorrect” statements.

The work of these researchers has yielded important findings in the facilitation of whole-class discussions, largely resulting in the generation of lists of conversational techniques of what I refer to as a dialogical nature—strategies intended to foster the clear and open communication and sharing of student ideas through class discussion. These research findings are valuable in that they provide understandings of how science instruction has evolved from a traditional teacher-centred approach to one that is focused on the students as active participants in their own learning.
What these studies have generally not investigated, however, are the strategies that effective educators use during whole-class discussions that may support students’ cognitive reasoning about scientific conceptions. It is my belief that whole-class discussion-based teaching strategies also exist at another, cognitive model construction level, and that these strategies can foster students’ construction and refinement of explanatory models to help them visualize, comprehend, and reason about scientific phenomena. Collins and Gentner (1987), Gilbert and Boulter (1998), Vosniadou (2002), Gobert and Buckley (2000), and Windschitl, Thompson, and Braaten (2008) agree that engaging students in the processes of developing, evaluating, and reforming explanatory models can play a significant role in promoting their abilities to reason cognitively about various scientific concepts.

Before further discussing conversational teaching strategies at this second, more cognitively engaging level, it is important to explore the role that modelling plays in the learning process. The term model has many meanings; however, in the context of this article, a model is considered to be a simplified representation of a system or phenomenon that make its central features explicit and visible and which can be used to generate explanations and predictions (Harrison & Treagust, 2000).

Explanatory models are the descriptions or representations (verbal, symbolic, pictorial, graphical, numeric, etc.) that students develop to support and express their understandings of particular concepts or phenomena (Clement, 2008; Hafner & Stewart, 1995; Williams, 2011). Students’ development of explanatory models is believed to be supported by their construction of mental models, described as internal cognitive representations that support reasoning and understanding by simulating the behaviour of systems in the real world (Johnson-Laird, 1983; Schwartz & Black, 1996). Science instruction that is referred to as model-based utilizes curricula, learning tasks, and teaching strategies that have been designed to foster students’ construction, evaluation, and revision of explanatory models for the purposes of making sense of abstract and challenging concepts and phenomena.

In my current research, I seek to identify and describe the specific types of discussion-based strategies that exemplary science teachers utilize in fostering students’ construction of explanatory models. The findings that I share in this article are based on a recent study in which I investigated the cognitively targeted conversational tactics employed by a group of high school physics teachers to support their students’ development of explanatory models for the concepts of charge, energy, current, voltage, and resistance in electric circuits. My aim was to determine whether the strategies that were used existed on multiple levels and if so, what the relationships between such levels might be.

Research Methodology

Since my intent was to investigate teachers who utilized whole-class discussions to promote students’ participation in model construction activities, I started by identifying high school physics classes that were learning about circuit electricity through a model-based curriculum. This curriculum, known as CASTLE (Capacitor Aided System for Teaching and Learning Electricity), centres on a conceptual model of charge as a compressible fluid, experiencing differing degrees of pressure (voltage) and resistance as it flows through varying components of a circuit. This is in distinct contrast to traditional curricula that treat electricity as the flow of electrons in wires whose quantitative behaviours are dictated by the Ohm’s Law equation V = IR.

Over the course of the 6–8 weeks of electricity study, approximately 30 hours of classroom activity was videotaped and later transcribed. The primary use of this data was the identification and description of specific discussion-based strategies that the physics teachers used in fostering students’ cognitive...
model-building processes. Therefore, the focus of this data collection process was on capturing segments in which the teachers and their students appeared to be engaged in the co-construction of explanatory models of electricity through whole-class discussions. A grounded theory qualitative research approach (Strauss & Corbin, 1998) was employed for this part of the study. In particular, the constant comparison method (Glaser & Strauss, 1967) was utilized in an effort to develop plausible interpretations of the teachers’ conversational strategies.

Teachers’ spoken statements on the transcripts were coded into the two levels described previously: Level 1—*dialogical* strategies that support students’ active participation in scientific conversation and Level 2—*cognitive model construction* strategies that foster students’ engagement in the development of explanatory models to support their understanding of scientific concepts. *Dialogical* teacher strategies were generally observed to be conversational in nature, occur within a very short time frame, support dialogical interaction, encourage increased student participation and ownership in the discussion, foster a classroom culture that promotes and encourages student input, value opinions, and consider alternative conceptions and viewpoints. *Cognitive model construction* strategies, on the other hand, were generally observed to utilize cognitive strategies for fostering model construction and evolution through questions and comments that focus on students’ preconceptions, patterns in the data, and the processes of reasoning about the scientific concepts at hand. Generally, these strategies appeared to influence the direction of discussion for longer periods than the dialogical strategies described above.

Strategies at the *cognitive model construction* level were then further coded as contributing to one of four phases at yet a third level—the *model construction cycle*. The four phases of this cycle are experimental Observation, model Generation, model Evaluation, and model Modification that appeared to direct the specific conversational teaching strategies at Level 2. Based on these phases, I refer to the model construction cycle as an OGEM cycle. The coding process I used to determine which phase each of the teachers’ statements were believed to contribute to utilized the following criteria:

**Observation (O):** The statement makes reference to observations made or outcomes noted either in a previous classroom experiment or demonstration, an everyday occurrence, a television or Internet video, or other source. This may be done for the purpose of bringing the attention or memory of the participants to the phenomenon being discussed. Examples of key phrases that help identify observation strategies: Did you see..., What did you notice..., Tell us about your observations..., What was detected..., etc.

**Generation (G):** The statement initiates or introduces a theory, model, conception, conjecture, or opinion. This may be done in an attempt to explain, convince, persuade, clarify, simplify, or describe one’s thinking or understanding to others. This can be done in either a declarative or interrogative manner. Examples of key phrases that help identify model generation strategies: What ideas do you have about..., What do you think is happening..., What explanation can you think of for..., I think that maybe what’s going on is..., etc.

**Evaluation (E):** The statement refers to a theory, model, conception, or explanation that has previously been or is currently under discussion. The purpose of the statement is to respond to, consider, evaluate, judge, refute, criticize, support, or endorse a particular explanatory model. Examples of phrases that help identify model evaluation strategies: Do you agree with..., That makes sense, I also believe that..., Are you sure you can have..., Do you think that is the way..., etc.

**Modification (M):** The statement offers a suggested change, adjustment, or modification to a theory, explanation or model that is under evaluation. This may involve only a minor
alteration, variation or addition or could introduce a completely revised model with little resemblance to the original. Examples of phrases that help identify model modification strategies: Does anyone see it a different way..., Would anyone suggest changing..., Maybe if we explained it like this..., Could it be more along the lines of..., etc.

As a secondary source of data, reflective interviews were conducted with the teachers in an attempt to juxtapose my hypotheses about the model construction processes I was observing with their own beliefs about what was happening in their classes. Through a process of video and transcription review, I was also able to acquire feedback from the educators on the intentions and perceived effectiveness of their selected conversational strategies and share with them my theories about multiple strategy levels.

**Sample Transcript Analysis**

In an attempt to portray the nature and products of the investigative process, I am including here an example of my analysis of the transcript of a 5-minute whole-class discussion episode from the class of one of the teachers. Just before the whole-class discussion that took place in this episode, the students conducted an investigation from the CASTLE curriculum in which they started with a simple circuit containing one light bulb in series with a battery pack. A compass was placed under the wires of the circuit as an indicator of charge movement in the wires. The students then made adjustments to the circuit by adding a second and eventually a third bulb in series with the first and were asked to take note of the subsequent bulb brightnesses and compass needle deflections that occurred as a result of these changes. This exploration is designed to provide the students with the necessary data (brighter vs. dimmer bulb brightness, increased vs. decreased needle deflection) they require to engage in the construction of explanatory models for the effects of light bulbs on the behaviour of electric charge in circuits.

The transcript of the whole-class discussion segment follows (T indicates the teacher and S refers to students):

T: In what way do you think bulbs influence charge in a circuit?
S1: The bulbs, they take up some electricity from that part of the circuit so it leaves less for the next filaments.
T: Take up electricity. Anybody have another idea?
S4: We just thought that every time we did it [added more bulbs], it [charge] would just become slower and slower, so by passing through more bulbs, it probably just takes a longer time.
T: Longer time, okay. So it takes a longer time because?
S3: I would say that since the wires are so thin, then that way the charge flows through but when there’s a filament, some of the charge gets lost in the bulb so it goes slower and takes longer.
T: So where does it go in the bulb? What happens to it when it gets to the bulb?
S2: It’s getting used.
S1: It goes up to the filament and then goes back down so it’s still connecting.
T: It’s still connecting.
S5: Electricity is infinite.
S6: It’s not infinite. It’s a circuit!
S2: It’s being used up.
S7: It gets more charge from the battery and goes around again.
S6: If it was infinite then we wouldn’t be having gas [energy] problems.
T: Okay, so do you think the charge gets changed?
S4: No.
S2: Probably.
S3: I think it slows down.
S6: It uses up energy.
S1: It probably lowers.
T: So you think it’s less?
S3: Yeah, it gets slower.
S4: I think it slows down much more because it has to light more stuff.
S1: Like, as it gets to the end of the circuit there’s slower charge.
T: Okay, so a couple of people have said it slows down. So that’s why the compass doesn’t move as far?
S7: Do we know if the compass measures speed or charge? We don’t know that yet.
T: Oh, well so far it measures charge flow rate, so the charge flow rate is different with one bulb and three bulbs do you think?

While it is virtually impossible to have every single student in the class participate in all classroom discussions, this teacher does manage to support seven of the nineteen in making contributions. What is perhaps initially most apparent about this episode is the teacher’s ability to involve his students in extended periods of discussion with minimal participation on his part. What may not be apparent, however, is the work that the teacher is doing at the cognitive model construction and model construction cycle Levels 2 and 3. He begins the discussion with a generative question requesting the initiation of model construction (Strategy 1) of the effects of light bulbs on charge movement in electric circuits. “In what way do you think bulbs influence charge in a circuit?” This is done to engage the students in the model generation process and begin brainstorming ideas about what might be going on inside the wires as bulbs are added to the circuit. When the first student response suggests the commonly misconceived explanatory model of light bulbs taking up or consuming some of the electricity, the teacher is careful not to evaluate the reply as being incorrect. Instead, the teacher utilizes the dialogical strategy of paraphrasing the student’s response to honour it and make sure all other students in the class heard it, and then opens the floor to other explanatory models by using a different iteration of the cognitive model construction strategy of requesting the initiation of model construction (1). “Take up electricity. Anybody have another idea?”

Although one student suggests an explanatory model of reduced charge flow that partially aligns with the scientifically accepted model, it is clear that the notion of charge being used up, lost, or consumed in the light bulbs is still very much on the minds of many others. Exercising patience and restraint, the teacher elects to facilitate continued discussion rather than taking it over and allows the students to express their opinions, all the while paraphrasing key points and requesting explanations to clarify the proposed models (Strategy 2). “So it takes a longer time because...?” and “So where does it [charge] go in the bulb?”

After fostering the generation of four separate explanatory models for the condition of the electric charge (consumed by bulb, passing through filament, infinite, replenished by battery), the teacher makes a simple statement, which considers the general nature of all of the suggested models and provides a summary of model elements contributed (Strategy 3) stating, “Okay, so do you think that the charge gets changed?” This appears to set the students off on a spree of evaluation of the existing models and the generation of some additional ones.

After hearing a variety of student suggestions, the teacher selects to focus attention on one student’s statement by paraphrasing it into a clarifying question, “So you think it’s less?” This serves as a combined dialogical strategy, keeping the conversation moving, and a cognitive model construction strategy, requesting evidence to support a model (Strategy 4) of reduced charge flow. This encourages students to begin evaluating the model, drawing on their experimental observations for support.

The teacher then groups together and paraphrases the student responses that are concurrent with the target model of reduced charge flow rate that he is aiming for. Next he employs the strategy of requesting students...
generate a model element based on evidence (Strategy 5) in hopes that the students will continue to reason toward the target model, based on what they saw the light bulbs and compass needles do. “Okay, so a couple of people have said it [charge flow] slows down. So that’s why the compass [needle] doesn’t move as far?”

The segment ends with a question by a student concerning precisely what a compass needle’s deflection indicates about charge movement in the wires it is placed nearby. The teacher first addresses the issue by providing distinction between two elements of the model (Strategy 6) regarding what is measured and then turns the discussion back over to the students by requesting patterns in the observations (Strategy 7) by asking whether charge flow rate is different with varying numbers of bulbs in the circuit. “Oh well, so far [in our model] it measures charge flow rate, so the charge flow rate is different with one bulb and three bulbs, do you think?” This serves to re-focus the discussion on the processes of generating and evaluating explanatory models for charge movement in bulbs and wires.

Findings

The analysis provided above represents a single 5-minute classroom discussion episode in which the teacher utilized seven different cognitive model construction level strategies. In total, this study identified 39 individual conversational strategies from the whole-class discussion transcripts of these educators. While space in this article does not permit sharing of the complete collection, the table below does highlight four more of these strategies. The table follows a classification system that increases in specificity from left to right: It starts with the four Level 3 model construction cycle phases on the extreme left then lists a specific Level 2 cognitive model construction strategy believed to contribute to each of the phases in the second column. The final column provides an example of each of the strategies from the transcript of one of the teacher’s classes.

<table>
<thead>
<tr>
<th>Level 3 OGEM Cycle Phase</th>
<th>Level 2 Cognitive Model Construction Strategy</th>
<th>Classroom Transcript Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>O Observation</td>
<td>Requests patterns in observations</td>
<td>T: Okay. How about when you added a second resistor—what did you notice?</td>
</tr>
<tr>
<td>G Generation</td>
<td>Requests or provides an analogy</td>
<td>T: You’ve already seen one analogy about water flowing through pipes. Is there any other analogy you can think of that would explain why this filament would have higher resistance than this filament?</td>
</tr>
<tr>
<td>M Modification</td>
<td>Requests or provides concept integration</td>
<td>T: When we added a resistor to the circuit with one bulb, what did you notice? S5: The bulb got dimmer. T: Like when you added a second bulb to the circuit? S5: Yes—the same thing happened. T: So, that pretty much tells us that a light bulb is a type of resistor, at least in terms of their effects on other elements in the circuit.</td>
</tr>
</tbody>
</table>
Based on the identification, description, and categorization of the cognitively focused discussion-based teaching strategies investigated in my research, I have recently begun the process of sharing this information with students in the secondary science stream of our postgraduate B.Ed. program at St. Thomas University. In my secondary science methodology courses, I have developed a seven-step process for developing the students’ skills in leading effective whole-class discussions.

1) I begin by accessing the pre-service teachers’ prior knowledge about leading discussions; uncovering their experiences and beliefs about the manner in which teachers ask questions, respond to student comments or queries, prompt students to examine and critique their own and peers’ ideas, encourage students to develop plausible arguments for explanations, and foster students’ revisions of their own reasoning once new evidence is presented. For research ethics purposes, this is done through an interview and survey process conducted by my research assistant.

2) By next introducing the future educators to video recordings and transcriptions from selected classroom segments of experienced science teachers, they become aware of the tasks teachers undertake when leading a class discussion. This can include such tasks as maintaining classroom management, providing a classroom culture that supports student contributions, managing technical and audiovisual supports, supporting student metacognition by having them think about their own thinking, and fostering a type of classroom conversation that allows students to make mistakes and learn through a process of idea evolution as opposed to getting the right answer first.

3) Once the pre-service teachers have had the opportunity to observe the discussion-leading strategies of exemplary veteran educators in the field, the next step is for them to try out some of the tactics for themselves. Their first occasion to do so is during peer-to-peer micro-teaching sessions on a science topic and grade level of their choice. In planning these 40-minute mini-lessons, the pre-service teachers are required to build in a whole-class discussion segment.

4) These in-class trial sessions are videotaped and copies are provided to the pre-service teacher and three classmates. Within a week of the in-class micro-teaching experience, the pre-service teacher meets with their three colleagues, who have each had an opportunity to review the video recording of the lesson. Using a rubric co-operatively developed in class, they make notes and comments that will be used for the basis of the discussion during the meeting, providing constructive feedback to their colleague.

5) At the end of the course, and just before they begin their teaching internships, the students participate in a second interview/survey process to evaluate any change in their knowledge and opinions about leading class discussions.

6) During their 8-week teaching practicum, the student teachers are encouraged to seek out opportunities to engage their students in the discussion-based co-construction of explanatory models for concepts within the curricula being taught.

7) Upon completion of their internships, the B.Ed. students participate in the interview/survey process a final time to evaluate the impact that having a “real world” opportunity to practice their discussion-leading strategies had on their understanding and comfort with the techniques.
Contribution

As a result of the study described in this paper, two distinct levels of discussion-based teaching strategies have been identified: *dialogical* strategies that serve to support clear and open communication of student ideas through class discussion, and *cognitive model construction* strategies that are believed to foster students' development and refinement of explanatory models to support reasoning about scientific phenomena. Within the *cognitive model construction* category, 39 specific discussion-based teaching strategies have been identified, each of which contributes to one of four phases (Observation, Generation, Evaluation, and Modification) of a *model construction cycle* existing at a third strategy level. In this article, examples of eleven of these strategies have been provided.

Based on this research, a seven-step process has been developed to share the key elements of these teaching strategies, provide examples of their use from the classrooms of experienced teachers, and provide opportunities for pre-service science teachers to practise and receive peer and instructor feedback on their implementation. Ultimately, my hope is that these efforts will equip the secondary science educators emerging from our postgraduate B.Ed. program with specific strategies for fostering their students' construction and understanding of effective explanatory models for conceptually challenging ideas.

Acknowledgements

This material is based upon work supported by the U.S. National Science Foundation under Grants DRL-1222709 and DRL-0723709, John J. Clement, PI, with a subcontract to E. Grant Williams. Any opinions, findings, conclusions, or recommendations expressed in this paper are those of the author and do not necessarily reflect the views of the National Science Foundation.

References


---

**Grant Williams**

Dr. Grant Williams is an assistant professor in the School of Education at St. Thomas University in Fredericton, New Brunswick. His research interests are inquiry-based science teaching, classroom discourse analysis, student explanatory model construction, pre-service science teacher preparation, and in-service science teacher professional development. His current research is supported through a National Science Foundation DRK-12 grant subcontract with Dr. John Clement of the Scientific Reasoning Research Institute at the University of Massachusetts Amherst.
RESOLVING CONFLICT IN THE CLASSROOM – WALKING THE EXPERIENCE CUBE

Scott Comber, Dalhousie University

ABSTRACT

Many classroom exercises are team or group based and often result in unproductive conflict amongst team members. Therefore, it would be ideal if the interpersonal conflict found in teams could be harnessed in productive ways that would develop both an applied set of conflict resolution skills and also allow team or group members to resolve their conflict more effectively. In essence, to find a way to capitalize on the dysfunctions found in groups and teams and turn it into an experiential activity that could be used to increase core conflict resolution skills and practices.

With this in mind, a framework or model was needed that could be introduced to an entire class and practiced prior to team and group experiences. The ‘Experience Cube’ (EC) provides an ideal experiential-based model. The (EC) is designed to help students and teams deal with their conflict related issues. The purpose of the EC is to encourage students to be transparent about their classroom experience, and to provide them with a language and approach that reveals assumptions and any underlying conflict that may derail a team/group experience.

This four-part model allows students to respectfully approach another team member or someone in the class (including the professor) and state in a respectful way what is taking place for them (their experience). This paper provides an overview of how the experience cube can be used in classroom settings to build more effective teams and resolve conflict related issues within teams.

What is ‘walking the experience cube’?

Similar to many of you, I have students complete a number of group/team assignments each term. Almost invariably, there’s friction among some team members. In the past, I had too many instances of dysfunctional teams/groups approaching me to resolve their issues. Now, at the beginning of each semester, I introduce the ‘experience cube’ during the first or second class. The ‘experience cube’ is the best tool I’ve found to help students and teams deal with their interpersonal issues.

The purpose of using such a tool is to encourage students to be transparent about their classroom and team experiences, and to provide them with a language and approach that helps them to reveal their assumptions and reveal underlying conflict that may be derailing the team/group experience (Stone, Patton & Heen, 2010; Frost, 2003). The goal is for students to be clear about their individual experience as it relates to the issues they are facing, and “be real about saying what they mean and meaning what they say” (Busche, 2009, p. 8). It helps them resolve conflict, provide feedback and listen to one another with more awareness. In essence, it helps to promote conversations that need to happen and to address the ‘real’ issues (Eldman & Crain, 1994). Also, I find that students want to provide me with feedback, but they lack the skill or assertiveness to approach the issue or concern.

The experience cube is represented as a four-quadrant model (see Figure 1) that allows students to approach another team member or someone in the class (including the professor) and state in a respectful way what is taking place for them (their experience).

Walking the Cube Exercise

Through my own experience, I’ve found that communication skills integrate well when a
A kinesthetic approach is taken. Something appears to happen when the brain is thinking and the body is trying to move in conjunction with this thinking. Therefore, I ask students to “walk the cube”. Prior to walking the cube, I ask them to think about a time in class or working with a group or team where they felt they needed to say something but did not. Then I have them use this experience or scenario to walk the cube with me.

To prepare for walking the cube, you will need to:
1. Draw the cube on a piece of flip chart paper
2. Explain each quadrant of the model (noted below)
3. Put the flip chart page on the floor; the goal will be to ensure that as the student is speaking, he/she is moving to and standing on the correct quadrant
4. Ask for someone to come to the front of the room in order to practice “walking the cube”
5. Then ask the student, at the front of the class, to explain, in one or two sentences, the issue or the conflict-related scenario that they would like to address
6. Help the student to practice ‘walking the experience cube’; the goal is for the student to have the ‘real’ conversation

In preparation for this exercise, explain each of the four quadrants of the model. I have noted these quadrants in Figure 1. In my experience most students find the four-part model easy to understand. However, many students may find it difficult to separate observations from thoughts (Ury, 1993). Thoughts represent our thinking brain, our assumptions, judgements and stories about the situation. Observations are fact-based aspects of the situation that can be seen or heard (audio recorded or video recorded), not the thinking or meaning we take from such actions. I also ask the students to begin each conversation by stating their intention. This sets the tone for the rest of the conversation as it informs the other individual what may be better as a result of this conversation. In essence, it shows positive

**Intention** – what do you hope may be better as a result of this conversation? Intention is NOT stating the solution you need to solve the issue, but focusing on what will be better if the conversation goes well – better team morale, product, relationship, etc.

<table>
<thead>
<tr>
<th>Observation</th>
<th>Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just the facts. Facts are those things that could have been videotaped or audio recorded. They are not what you thought about a particular situation but those things that actually took place.</td>
<td>What are my thoughts, assumptions, and judgements?</td>
</tr>
<tr>
<td>For example, a door slammed; the email stated the following seven words. Be as specific as possible.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Needs</strong></th>
<th><strong>Feelings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you need from this conversation or what do you need to tell the individual? This is not about stating the solution.</td>
<td>How do I feel about this issue, or conflict... mad, sad, glad, frustrated, angry, distraught, etc?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Request</strong></th>
<th><strong>Observation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“The ask” – you may request something from the other person.</td>
<td></td>
</tr>
</tbody>
</table>

intention. For example, my intention may be to have a better relationship, team dynamic, process, or product as a result of the conversation.

Also, students often confuse the **Need** quadrant with the solution. For example, if you ask students what they want from the conversation they usually state their solution. This quadrant is not about the solution. The **Need** quadrant of the experience cube is to describe what the student needs from the conversation. It usually falls into one of two categories, “I need to know more (more
information, more about what is going on, etc.)” or “I need you to know something.” For example, in the latter context, you may need to let an individual know that this is the third time that you have addressed this issue with him/her and you need to let them know that the issue will be raised with a third party such as a professor, or supervisor. Again, the focus of this quadrant is not about stating the solution you need. For example, a team member may not be producing the work you want. It may be easy to tell the student you need him/her to produce different work, however, the Need quadrant is about what you need from the conversation. In the example noted, you may need to know why the work is not what you would expect it to be.

Once you invite a student to the front of the room, you will need to fill two roles. The first role will be that of the respondent. The respondent is the person with whom the student needs to have the difficult conversation. When you take on this role, you do not need to respond; you are there simply to act as someone to whom the student can speak.

The second role is that of the observer. As the observer you will need to ensure that when the student speaks he/she is standing in the right quadrant. For example, often students confuse the Observation quadrant, which is fact based (those things you can video tape or audio record) with the Thought quadrant. For example, a student standing in the Observation quadrant may say, “you don’t like to do the work”. This is not an observation, but a judgement, and a thought. Therefore, the student needs to stand in the Thought quadrant. Another example would be when a student says, “you were 15 minutes late to the last two meetings”. This would be an observable fact, one that could be videotaped or audio recorded. As such, student should be standing in the Observation quadrant. I’ve discovered that most individuals confuse thoughts with observations and the line between these quadrants becomes blurred. In turn, the clarity of the ‘real’ conversation becomes grey when thoughts are confused with fact-based observations. In these situations conflict usually escalates. Also, when describing the Feelings quadrant, many students may start a sentence with, “I feel that…. Using the word “that” after the word ‘feel” usually means it is a thought and not a feeling. Therefore, in this instance, you would need to intervene and move the student to the Thought quadrant.

I usually work with one or two students at the front of the class to demonstrate how to ‘walk the experience cube.’ I then answer any questions and initiate a class exercise whereby the students work in triads to allow all students to practice walking the cube. In the triads, one student (the skilled person) explains the issue and practices walking the cube, another is the respondent (a person to whom the skilled person can talk), and the third student is an observer (the person that ensures the skilled person is standing in the correct quadrant when speaking). Allow time for each person in the triad to practice each role.

References


Scott Comber

Scott is the Director of the Corporate Residency MBA program and an Assistant Professor at Dalhousie University, in Nova Scotia, Canada. He is also a faculty member with the Canadian Medical Association. Scott’s primary research areas are leadership development education, health care leadership and Millennial values. Scott gained over 30 years of experience in the financial, IT and health care and consulting fields and established and incorporated two of his own companies before assuming his role at Dalhousie University.

Scott specializes in the areas of leadership development, complexity, conflict resolution, team building, and value based culture change; he is action oriented and practical. He works within organizations to develop great leaders, increased quality of work life, develop networks and structures to support ethical decision-making, create conflict resolution systems and facilitate teams and leaders through change.

Scott is a keynote speaker, author and has been quoted in sources such as the Globe and Mail, Financial Post and Business Week. In addition, he holds an MBA (Finance) an MA (Human Development) and a PhD in Human and Organizational Systems. Scott is also certified as an Executive Coach and in Conflict Resolution and Negotiation. When not working, Scott’s main life focus is raising his twins, Mac and Ella.
CREATING A PARTICIPATORY ONLINE CLASSROOM: REFLECTING ON FACE-TO-FACE VERSUS ONLINE DELIVERY OF A HISTORY COURSE

Stephen Dutcher, Department of History, University of New Brunswick (UNB)

ABSTRACT

This 25-minute session explored creating a participatory online classroom by using, as a starting point, my experience in converting my prohibition and rum-running course from a face-to-face course to a fully online one. Participants were asked to read a one-page summary of the different approaches taken in the face-to-face and online offerings of the course, and to think about what they saw as the possible advantages and disadvantages of the move to an online format. A general discussion ensued that pointed to some of the strengths and weaknesses of online courses generally, such as an increase in student diversity and non-participation by some students. As the discussion progressed, I shared some additional observations based on my specific experience with the online version of the course (such as the ability to go back to reflect on what had been posted on the discussion board and students getting “lost” due to no physical classroom).

I had two objectives in proposing and leading the session entitled “Creating a Participatory Online Classroom: Reflecting on Face-to-Face versus Online Delivery of a History Course” at the 2012 Teaching Showcase: 1) to share my experience of converting a course from a face-to-face (FtoF) to a fully online course and 2) to do so in a way that was consistent with my participatory approach in the classroom. To this end, I began the 25-minute session with some brief background about this specific course entitled The History of Prohibition and Rum-Running in Canada, 1827-1948: how it had been created in the early 1990s by Dr. E.R. Forbes and how I had inherited it as Dr. Forbes’s teaching assistant in 1998 and proceeded to modify it from a straight lecture course to one that utilized co-operative and problem-based learning.

I then gave each participant a one-page summary of the different approaches that I had taken most recently with the course – FtoF during Intersession of 2011 and fully online during the Winter term of 2012 – broken down into five categories: pedagogy, content, delivery, participation, and assessment. Pedagogically the courses were the same, and there were minor changes in terms of content and assessment. Delivery was obviously different, with the FtoF course featuring two hour-and-a-half classes/week (using mini-lectures and co-operative learning activities) as opposed to the online course’s participation through a threaded discussion board (with “backgrounders” instead of mini-lectures and the content divided into six two-week modules). Students in both classes were divided into teams (3-4 for FtoF and 4-5 for online). In the FtoF class all teams had to answer one or two questions within their team, with a general class discussion ensuing; in the online class, to avoid repetition, teams took turns facilitating the modules (posting answers to the posed questions) while students in other teams were asked to respond to the original posts using three questions as a guide (“What did I like about the posting? What might be missing? Are there any problems with the arguments, evidence, sources, etc. within the readings?”). Each online student was expected to post a minimum of two substantive responses (approximately 100-150 words each) per module in the “Open Forum” or class discussions (aside from discussions within their teams, where they split up each module’s
readings and then shared summaries of their reading with the other members of their team). I responded to virtually all posts as well as providing general comments, and tried to keep students on a fairly strict two-week schedule: reading of the materials (Sunday to Saturday), sharing of summaries of materials within the small teams (Sunday to Tuesday), and posting of answers and responses (Wednesday to Saturday).

Participants in the Teaching Showcase session were given four minutes to read through the one-pager and to think about two questions posed about the conversion to the online format: “What are the possible advantages of this online approach?” and “Possible problems or disadvantages of this online approach?” A general discussion followed, and I recorded the points raised on a flipchart. Not surprisingly, given the brief time allotted for absorbing the information about the course – as a result of the 25-minute limit to the whole session – the comments made by the participants were of a more general nature. The possible advantages that they suggested included the diversity of students in an online environment, the support offered by a term-based cohort over the usual individualized learning in distance courses, and the creation of “dialogue” among all students (as opposed to just a few dominating class discussions in a FtoF classroom). The possible disadvantages of this online approach they suggested included the problems posed by students’ differing abilities, a lack of participation on the part of some students, and the intimidation caused by technological issues.

I had written up my own list of advantages/disadvantages before the session, and, as the discussion progressed, I began to share my list. In terms of advantages, I found that it was easier to make students accountable since it was more difficult for them to passively participate in the course; a lack of posting meant no participation and no presence. I also found that it was easier to get more students to participate more often (a point alluded to in the comment about “dialogue”), and that students had the added advantage of being able to go back and reflect upon all of the posts within the course. My experience indicated as well that I obtained a better knowledge of just who the students were as their personality, etc., arose out of their postings and that, as was suggested, a cohort-based approach provided support and encouragement that promoted better student retention as opposed to an individualized approach to distance learning (14 of 15 students finished the course) see footnote 1 overleaf.

To the possible disadvantages participants had suggested I added several others: non-participation as creating dysfunctional teams, the tendency of some students to post non-substantive responses of one or two lines, some students getting “lost” during the two-week modules (especially since they did not have to go to an physical classroom), and the lack of integration of the various readings within a module (students just posting summaries of the pieces under discussion without drawing connections between the pieces). Building on the technology comment, I also talked about how this was a very significant issue: most students faced a huge learning curve regarding threaded discussion boards, etc., and some even had difficulties gaining access to the course site as it was the pilot term for UNB’s new Desire2Learn system.

Other points emerged as the discussion progressed. One participant mentioned the possibility of overburdened students “racing” through the material versus reflecting on it while another suggested that the fact that these online students never met each other might have undercut their ability to get along and work together. In terms of this latter point, though, I responded that my experience with the online version of the course indicated that students often enjoyed at least as productive a working relationship with other students as in the FtoF offering of the course.

Given the time constraints, this session largely accomplished its objectives: to use my
experience with the prohibition and rum-running course as a springboard to generate a discussion about the possible advantages and disadvantages of moving courses from a FtoF to an online environment. In retrospect, it would perhaps have been better if I had also included some discussion amongst participants at the beginning about their own aspirations and/or experience with online teaching.

Stephen Dutcher

Stephen Dutcher is the managing editor of *Acadiensis: Journal of the History of the Atlantic Region* and teaches history online and face-to-face at the University of New Brunswick as well as co-operative studies online through Saint Mary’s University. His current research focuses on the nature of power relations between the Wolastoqiyik (Maliseet) people and British colonial society during the late 18th century.

Footnote 1: The estimates of dropout rates for online versus FtoF courses varies widely. One study of a small, private American university documented a 35%-50% dropout rate for online versus a 14% dropout rate for FtoF courses. A literature review in another article revealed a broad range of differences, ranging from a 13.5% online versus a 7.2% FtoF dropout rate all the way up to a 40%-50% online versus significantly less than 40% FtoF dropout rate. Still another study found that online courses suffered on average from a 15%-20% higher dropout rate. See, respectively, Maggie McVay Lynch, “Effective Student Preparation for Online Learning,” *The Technology Source* Archives, University of North Carolina, November/December 2001, http://technologysource.org/article/effective_student_preparation_for_online_learning/; B.J. Gleason, “Retention Issues in Online Programs: A Review of the Literature,” Second AIMS International Conference on Management, http://www.thinairlabs.com/papers/216.pdf; and “Study Examines Online Education Retention Rates,” http://www.braintrack.com/online-colleges/articles/study-examines-online-education-retention-rates.
GROUPS: STRATEGIES FOR SUCCESSFUL COOPERATIVE LEARNING

Reina Green, Mount Saint Vincent University

ABSTRACT

Group work has become increasingly popular in university classes, and a review of the recent literature confirms the potential for successful cooperative learning when group work is assigned. Despite the benefits of such learning, identified by both students and researchers, some students are ambivalent about group work because of past experience. They find it stressful to work with others and believe that they can complete the task more efficiently on their own. They frequently complain when group work is assigned, contributing to a negative group dynamic. Various factors can cause interpersonal conflict in a group, limiting cooperative learning, and these can range from difficulty finding a time to meet as a group, to an instructor's failure to provide adequate instructions (Myers et al., 2009). Drawing on the literature, personal experience, and discussion with session participants, I offer specific ways of encouraging students to take a more positive approach to group work and of fostering cooperative learning. These include addressing students’ concerns about group work and providing strategies for dealing with interpersonal conflict, organizing groups to ensure a range of abilities and opinions, providing clear instructions for the task assigned and clear guidelines on peer-to-peer communication, and encouraging individual student accountability.

Group assignments are becoming more popular in university courses so that, by the time they graduate, over 90% of students will have worked on some type of group assignment (Lei, Kuestermeyer, & Westmeyer, 2010). Thankfully, most students regard such activity positively (Myers, Smith, & Eidsness, 2009). However, educators have to consider whether working in peer-groups is an effective way for students to learn. Group work is assigned on the belief that participants will collaborate and cooperate to optimize each other’s learning; however, not all group work results in cooperative learning as defined by Summers, Veretvas, Svinicki, and Gorin (2005). These researchers define cooperative learning as a specific type of collaborative learning, distinguishing the two by noting that, while the goal and period of the activity are defined in collaborative learning, the tasks necessary to achieve the goal are not. In other words, students are left to determine how they will achieve a predetermined objective; in cooperative learning, the tasks are more carefully defined and the instructor oversees the activities more closely.

The current literature identifies a number of benefits of cooperative learning in post-secondary education, noting that students working in peer groups show improved retention of material and better critical thinking skills (Jorczak, 2011). These students are also more prepared for the workforce, better able to resolve conflicts, and have greater self-confidence (Lei et al., 2010). The students themselves believe that they can accomplish more, focus on tasks they find most meaningful, and profit from the different perspectives of other students (Myers, Smith, & Eidsness, 2009). While the benefits of cooperative learning are clear, they can be difficult to achieve, particularly when students select their own groups and are given little guidance. Moreover, students who have negative experiences when working in groups tend to view such work as non-productive, even stressful, and to avoid group work in future (Ediger, 2011; Hsiung, 2012; James, 2005).
contrast, students who are adaptable to change, tolerant of discord, and sensitive to conversational nuances are more positive about group work (Myers et al., 2009).

Given the benefits of cooperative learning and the challenges of ensuring that group work promotes such learning, researchers have identified a number of best practices. Drawing on the work of Johnson & Johnson (2002) and Summers, Beretvas, Svinicki, and Gorin (2005), along with my own experience, and discussions with session participants at the 2012 AAU Teaching Showcase, I offer the following six recommendations on how instructors can encourage students to view group work as more than an opportunity to socialize.

1. Assign students to small groups

Studies suggest that homogenous groups may be less effective for learning than heterogeneous groups because sharing divergent opinions—when expressed respectfully—can promote learning through collaborative discussion (Jorczak, 2011). However, when students self-select their groups, they often gravitate to people who are most like themselves. As a result, student interaction improves in self-selected groups, but learning may be limited because group members have similar ideas. Studies also show that students of all abilities do well in groups in which members have similar abilities. When groups comprise students of mixed abilities, those with high and low ability interact more than those with medium ability. These students do better in groups in which all students have similar abilities (Lei et al., 2010; Webb, 1991; Webb & Kenderski, 1984). Gender can also play a role in student interaction. Students work equally well in same-gender and mixed-gender groups; however, when there is only one woman in a group, she tends to talk less than when there are other women present, while a lone man will talk more than if there is another man in the group (Lei et al., 2010). In my own experience I find that a group will more often appoint a lone man as a speaker for the group than when the group is more mixed. Another factor that can limit student interaction is ethnic diversity as it can increase student anxiety and reduce learning. Student concern is often related to real or perceived difficulties in communication and a lack of knowledge of accepted practices in other cultures. As students become more familiar with one another and misunderstandings and conflicts are dealt with in a timely and appropriate manner, these negative effects are lessened (Lei et al., 2010).

In my own classroom, I give short in-class group exercises to help students become more comfortable with each other before I assign them to groups for extended projects. I also use a brief confidential questionnaire that asks students about their interest in the topic, their attitude toward group work, and their views of themselves (e.g. do they consider themselves outgoing or reserved, excited about sharing their ideas, interested in the ideas of others, etc.) to organize groups. In-class writing exercises that demonstrate students’ abilities in a subject can also be used to organize students into groups.

2. Encourage commitment to the group

Interpersonal relationships are most important to student perceptions of group work. Students enjoy meeting and learning from their peers and improving their own communication skills (Myers et al., 2009). They are most successful in groups that meet regularly over several weeks as this allows them to establish stronger connections with other group members. This is, as noted above, particularly important when the group is culturally diverse. Students are also more likely to be committed to a group when individuals are held responsible for group interaction (Johnson & Johnson, 2002). To this end, I emphasize the importance of compromise and collaboration, encouraging
students to be open to the ideas of others and willing to compromise. I also provide students with written guidelines on how to achieve a positive group dynamic (see Appendix).

3. Monitor group interaction

While students enjoy learning from each other, they are often unhappy when others are reluctant to share their ideas (Myers et al., 2009). I therefore advise students on the importance of regular and respectful communication and provide ways for them to communicate with each other through group discussion forums, chat rooms, and blogs within the class Moodle site, so that they do not have to divulge personal contact information. I do not grade these interactions, but should they become negative and the group does not appear to be taking steps to resolve the dispute, I will intervene. In addition, when assigning group work to be completed outside of class, I organize groups based on students’ schedules so that group members can meet together at least once a week. I take on this task as one of the most common complaints students have about group work is the inability to meet because of conflicting schedules (Myers et al., 2009), and objections increase greatly when groups are not self-selected. I also allow groups to meet for a few minutes in each class as this permits me to monitor group interaction.

4. Make expectations clear

Cooperative learning is most readily achieved when clear guidelines on group behaviour and assigned tasks are provided, as a lack of specific directions can increase student anxiety and cause group conflict (Myers et al., 2009). It is not enough to ask for a report on a particular subject without detailing the scope of the report, the nature and extent of research required, the appropriate method of reporting, and the timeline by which the various tasks should be completed (Myers, Smith, & Eidsness, 2009).

5. Provide ongoing support

When the majority of group work is to be completed outside of the classroom, students should have the opportunity to raise questions in class so that additional instructions can be provided when necessary as studies show that instructor support is vital to cooperative learning (Ediger, 2011; Summers et al., 2005). If this is not permitted, students are less likely to consider their involvement in group work an integral part of their learning. Groups may also welcome a brief visit from an instructor when they meet, as students are more likely to identify specific concerns when they are actively working on the project.

Groups experiencing difficulty because of interpersonal conflict require even more support, and instructors should be prepared to intercede and provide mediation when necessary. Moreover, in my experience, groups can benefit from having the right to “fire” students who repeatedly fail to respond to communications, attend meetings, or complete work they have agreed to do. Groups rarely exercise this right, but having it often reduces fears that the group will be penalized because of one student, and can encourage a less motivated student to do the necessary work.

6. Assess individual learning

Students view those who contribute little to the group and who receive credit for other people’s work as a significant problem. Further, they may blame these “slackers” for negatively affecting the entire group, believing that students who do very little work do not care about other group members (Myers, Smith, & Eidsness, 2009). Making students accountable for their own contributions by grading both individual and group components of a project can therefore improve group dynamics. For example, a project may be based on short individual tasks completed beforehand, or students may be required to submit personal reflections on a project and what they have
learned through the process of its completion. Students may also be required to rotate various duties between them, such as that of taking minutes of group meetings, or reporting group discussions to the class.

In conclusion, while group work is endemic in education, it does not always lead to successful cooperative learning. If group work is restricted to students chatting with their friends about a reading in the last twenty minutes of class, the learning—and student participation—is likely to be limited (Summers et al., 2005). In contrast, cooperative learning requires significant preparation: learning activities must be planned and structured, groups organized to include students with a range of abilities and perspectives, adequate instruction provided, students held accountable for their own contributions, and ongoing instructional support provided throughout the process (Johnson & Johnson, 2002). The benefits, though, are well worth the effort.

References


Reina Green

Reina Green is an Associate Professor of English who teaches drama, including Shakespeare, and has research interests in Canadian theatre and contemporary performance of Shakespeare’s plays.

Appendix

Distributed to students participating in group performance projects in ENGL 2201: Shakespeare by Dr. Reina Green, Dept. of English, Mount Saint Vincent University

Performance Groups: Group Dynamics

Expectations

Many students have mixed feelings when it comes to group work, and these may be coloured by past experience. Some students believe they will create a better project by themselves; some believe that they will have to do most of the work and others will benefit from their hard labour; others believe that it is inefficient and inconvenient to arrange meetings and consultations with others in order to accomplish a task. I have done my best to address each of these concerns by ensuring that you can all meet for two hours during the week according to your schedules, by making each member in a group accountable for his or her contribution to the project, and by providing as many avenues for communication as possible. Now, I want you to do your best to make your group work and exceed all your expectations. Group dynamics can be tricky, but I consider it the responsibility of each and every member to make the group work. In my experience, the sticky issues often involve the following:

Compromise

It is guaranteed that when working in a group, you will not get your own way all of the time. You have the right to put forward your ideas (respectfully, of course). You also have the responsibility to accept the majority decision and to do so without complaint.

Not only will you need to compromise, but it is likely that one or two students will take leadership roles in your group. Support them, encourage them to organize your group, but don’t allow them to do all the work. If you do, they will grumble about the slackers in the group and mark your group participation accordingly. You will grumble about them being too controlling and mark their participation accordingly. I will mark you as a dysfunctional group. The solution to misunderstood expectations is communication (see below).

Communication

Regular respectful communication is vital for a good group dynamic. First, you need to be very clear about how people can contact you—cell phone, email, etc. You then need to be diligent in checking your messages and responding to them. Review the action items for each group member regularly. Send each other reminder emails; reply to those reminder emails; appoint someone as group nag. If an emergency arises and you are unable to attend a meeting, contact all the other group members. Don’t stand them up—remember they will mark your group participation accordingly. When communicating with one another (ESPECIALLY by email), do so respectfully (see Compromise above). It is also important to have fun as a group. My recommendation is that you eat pizza—or chocolate—while rehearsing.
Commitment
You may all have different levels of commitment to this class; however, I hope you will all be equally committed to your group and to what you can achieve as a group. Be clear about the responsibilities you are willing to take on and those you are unable to assume (remembering that you don’t know what you can do until someone asks you to do the impossible). Again, be prepared to compromise (see above).
TONGUE-TIED IN MATHEMATICS

Andrew Hare, Saint Mary’s University

ABSTRACT

Many students are tongue-tied in mathematics. The teacher of mathematics faces a number of challenges in addressing this situation. First, it may be that a student has taken many math classes in the past where they were not expected to speak very often, or to communicate to either the teacher or their peers what it is they understand and what it is they do not understand. Second, many students have strong fears about speaking up about mathematics because they know that it is easy to say something incorrect or wrong, or to reveal how little they understand, and this is an embarrassment or humiliation that they wish to avoid. Third, symbols, equations and diagrams play a large role in mathematics communication, and many students struggle with basic literacy in these areas. Many can’t read an equation out loud, and therefore find themselves silent even when they know they don’t follow an explanation, because they can’t say out loud where it is they lose the thread. In this paper I will discuss practical methods for addressing these challenges.

Silence in the Mathematics Classroom

Many students speak only rarely in a mathematics classroom, and some never speak at all. Let us assume that the instructor has invited questions, and responds to questions in an encouraging and constructive way. Let us assume also that the instructor asks questions, poses puzzles, elicits help and in other such ways creates spaces and opportunities for discussion. Nevertheless there are strong forces afoot that keep many students silent.

Although a student can of course utter statements in other classes that reveal a lack of understanding, many students would probably agree that it is in the mathematics classroom that they can reveal in a short response, even a word, that they do not understand what is being discussed at all. It may also be in the mathematics classroom that they most often feel that they do not understand what is going on. No one wants to be wrong; even more, no one wants to be unambiguously wrong, wrong with no wiggle room and with no exit signs in sight. “Even a fool, when he holds his peace, is counted wise, and he that stops his lips, prudent”; argue though we might in class that it is better to find out as quickly as possible where we are wrong so that we can move on to a better understanding, the old proverb of Solomon still holds great power.

It is also in the mathematics classroom where being wrong, as students perceive this, has a great many shadings. Yes one can be wrong in a subtle or interesting way; one has traversed a long path and only at the last moment one has veered astray. Or one has walked along the right path and then taken a detour that has attracted many a traveller before: perhaps the instructor has made this mistake before in their own education. Or the mistake, once analyzed, yields information useful for the problem at hand, or serves as material for a valuable generalization. Still, students may also feel that some of their errors, if spoken aloud in the class, and revealed to their classmates, might not be subtle or interesting at all. They may simply be very elementary errors, of the sort that they have in the past noticed a classmate making. If they
have judged a fellow student before (and this judgment can happen very quickly), then they know only too well what they risk when speaking up. No one wants to be laughed at, even if the laughter is internal. One teacher mocking a student in a class, even if the mockery is meant to be gentle, can strongly reinforce such attitudes for many years to come.

Silence is infectious. If a student sits in a class with many other students who remain silent, then they too are more likely to quell the urge to speak up. In addition, students who have been silent, remain silent. Silence is “catching”, not only from one student to another, but from a past self to a present self.

Consider the following expressions in English (or consider similar such expressions in your mother tongue): “mute with fear”, “struck dumb”, “nameless dread”. After a number of years of schooling, and perhaps not achieving much success in mathematics, many students have developed a fear of the subject. They may have other negative feelings about mathematics, of course, but fear is a major component for many. “Math phobia” should not be taken literally as a true psychological phobia; yet the expression exists in order to capture a common feeling that many share and that helps keep them mute in a classroom.

Anyone who has taught mathematics for any length of time will have heard students confess this fear in crystal clear terms. Here is an example, taken from an online discussion of past experiences so unpleasant that the writers steered themselves clear of similar creative pursuits ever since: “Every time I look at math, the numbers and symbols seem to fall down into a black hole in my mind and I say to myself, ‘Nope!’”. In this paper I discuss a few particular strategies to help students read mathematics out loud and talk about mathematics. In my experience these strategies can help to loosen the grip of silence.

Notation and Abbreviation

It is important to inform students that they are not the only ones who can find the notations and symbols of mathematics forbidding. Many scientists complain of “impenetrable notations” and a “morass of symbols”, and express the belief that the same ideas and results could be achieved without all the unfamiliar notation. Perhaps the science closest to mathematics is physics, whose laws Galileo famously asserted are written in the language of mathematics. Still, when the first applications of group theory were being made to the study of symmetry in molecular physics, these tools were not initially welcomed, but instead met with distaste. The “Gruppenpest” episode (group theory as plague on the proper study of physics!) is a fascinating one in the history of physics.

Nevertheless, most scientists eventually come to terms with a great deal of mathematics. Today’s high energy physicists and condensed matter physicists for example use group theory extensively as just one of many mathematical tools in their research. Good notations, and more generally good abbreviations, are extremely useful. We can say more in a shorter time. We can free up mental space to think of harder, more interesting, and newer things. If the notation has captured the idea well enough, then it becomes easier to use this idea as a building block of its own in a longer calculation, or as a source of analogies to other ideas. The resulting notation can suggest extensions to the source ideas that were not obvious before. A great compression is effected: one that leaves you on the outside looking in if you don’t understand the notation. To reduce silence in the mathematics classroom, it is essential to be able to help students stop reading mathematics by looking at abbreviations uncomprehendingly and rather start reading notations and abbreviations meaningfully.
Delay the Introduction of an Abbreviation

The first strategy I use is to delay the introduction of a useful abbreviation. In this way we model the historical development of the subject — sometimes mathematics laboured on for years before the introduction of this or that useful notation. This practice also makes students feel the need for the abbreviation. Too often in classes as teachers we rush to smooth over problems that students have not even had the chance to realize were problems. In many cases the new notation won over the old because most mathematicians agreed it was superior in some respect; perhaps students will feel the force of this firsthand. Finally, to delay introducing the abbreviation helps students retain what the abbreviation is short for, because they have some experience with writing out the longer versions.

A relatively simple, but important, example is the notation for exponents. Consider the expression $5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$. I say to students “take 9 copies of the number 5 and multiply them all together”. There is no room for ambiguity; if a student understands multiplication, then they can understand what this expression means, although it may challenge them to work it out with pencil and paper. For a few problems I will write out expressions like this one in full. I hope students will see for themselves some of the problems with this notation. For example, it is hard to keep track of how many 5s appear.

‘Can you do Addition?’ the White Queen asked.
‘What’s one and one and one and one and one and one and one and one and one?’
‘I don’t know,’ said Alice. ‘I lost count’.

Through the Looking Glass by Lewis Carroll

I took some extra time to make sure I counted the right number of ones in that quotation. Clearly a better notation would keep track of how many 5s we wrote down. Now I can introduce the notation $5^9$. Delaying the introduction to this notation serves to underline what it is short for, so that when students meet with the more abstract $x^9$ they will be less likely to freeze. If in doubt they can unpack the notation to what it stands for, namely 9 copies of the number $x$ that are all multiplied together.

It is also important to teach students multiple options for reading an expression out loud. $5^9$ is “5 to the 9”, “5 to the power of 9”, “5 raised to the exponent 9”, “5 to the 9th power” among others. I remind students of how many options are available to them even when communicating a fairly simple message like a greeting, and in the same way they should be able to read expressions like this out loud in any of a number of ways. Here these options are more or less interchangeable, but we will see later an example where various options would be useful to use for various audiences, depending on their mathematical background. The ability to alter the “register” of one’s mathematical communication is a strong signal of a deeper understanding of the mathematical ideas in question, and I encourage my students to try to develop their fluency.

Invented Notation

The second strategy I use is to introduce invented notation that is not in general use. I let the students in on it: I announce that I will make up some notation for some expressions that seem to be recurring often and that are getting unwieldy. I will play the game fairly; the goal here is not to create some ridiculous notation that does no good. Instead I create a notation built around what we would like this notation to do. This reinforces the notion to students that notation is under our control. It is made by people for people, and it should serve us. It helps students learn how to judge and assess notation critically. It is one more way to help students become less passive in their mathematical reading and learning. It inspires a few of them to experiment with their own notation. Of course we all recognize the importance of a shared notation, and not a billion individual ones.
For example, we might use the notation \(P_9(5)\) to stand for the 9 copies of the number 5 all multiplied together. The P is for power, the 9 keeps track of how many 5s are being multiplied together. Is this clumsier than the standard notation? Undoubtedly. When we introduce logarithms later, however, we will see some commonalities with this pretend notation.

I tell students that Leibniz, one of the originators of calculus, experimented with notation often, and would write letters to his fellow mathematicians asking them what they thought of his latest attempts at improved notations for the fundamental concepts in calculus.

**Verbalizing a Key Idea**

“The only way a product of numbers can be zero is if one of the numbers is zero”. This encapsulates a principle that gets used dozens of times in a calculus course. When a student is trying to find where a curve reaches a peak or a valley, they sometimes are blindly following a procedure that they don’t really understand, that at some point involves getting all of the terms involving their unknown onto one side of an equation, with zero on the other side, and then attempting to factor this expression. There is great power in repetition, and I encourage students to say some such phrase out loud often enough that they understand that this is why they are factoring, and that ultimately this is why they have been taught so many techniques that help them factor. Too often in math classes students study methods for so long they forget what purpose these methods serve.

The more times students hear themselves using a phrase (either out loud or in inner speech) the more often they have reminded themselves about the object of their attention and study. In a term this might work out to hundreds of occasions of self-reminders as to what they are thinking about. Pointing to a calculation can communicate a (vague) message to another person, but it does not create a thought in the student’s own mind. “When I take this and put this here then this cancels and I have this.” These self-communications are not stand alone thoughts and create no lasting understanding in the student. I push students to unpack all the "thisses” into actual words.

**Visually Similar – Conceptually Different**

Often in mathematics we face expressions that look very similar, but mean very different things. For someone who looks at mathematics but is not able to unpack the symbols into meanings, sentences or calculations with these near-twin expressions in them, will be confusing at best or gibberish at worst. For example, \(f(x)\) and \(f'(x)\) look very similar to the eye. The first is some function of \(x\), like how far a ball has fallen when dropped off a cliff when we have waited a certain amount of time equal to \(x\). If we are measuring time in seconds and distance in metres, then \(f(1)\) is about 5 meters. The second is the derivative of that function of \(x\); in our example it would equal how fast that ball is falling when we have waited \(x\) seconds. These two meanings are clearly different. One of the goals of the first year calculus course is to help students master the concept of the derivative.

It is crucial then that students are able to say \(f'(x)\) out loud. Here are some options, in roughly the order of being increasingly explicit about its meaning. We might say the shorter ones when pressed for time, but if we understand the material, we can always use the longer versions. “\(f\) prime of \(x\)”, “the derivative of \(f\)”, “the derivative of \(f\) evaluated at \(x\)”, “the slope of the function \(f\) evaluated at \(x\)” (here we begin to see the conceptual meaning), “the slope of the tangent line to \(f\) at \(x\)”, “the slope of the line that most looks like the function \(f\) near the point whose \(x\)-coordinate is \(x\)”. I suggest to students that they practice switching from the longer verbal descriptions to the shorter ones and back again. They should not content themselves with silently scanning a textbook.
Conclusion

The story of Zechariah, the father of John the Baptist, may hold some lessons for us. He reacts with disbelief when he is informed by an angel that his wife will give birth. For this he is struck dumb. He only regains his speech in the act of writing down the name of his son. In mathematics our students can find themselves silent out of a lack of belief in themselves, and can find speech again upon learning how to name the expressions that they encounter.

Andrew Hare

Andrew Hare is a Lecturer in the Mathematics and Computing Science Department at Saint Mary's University. He is interested in mathematics education, particularly in problem solving, mathematics and reading, mathematics and language, and mathematical exposition.
ONE-ON-ONE CONVERSATIONS WITH STUDENTS IN LARGER CLASSES

Angela M. Kolen-Thompson, Department of Human Kinetics, St. Francis Xavier University

ABSTRACT

In this report, I share my experiences in enticing one-on-one conversations with my students via an email assignment called “Rants or Raves.” Students were required to submit four separate “Rants or Raves” any time during the term on topics of their choosing so long as they related to the course material. The rant allows students to make their voice heard regarding something they disagree with or are angry about; the rave allows students to share something that delights them. Combined, these reflections contributed 10% to the students’ final grades. Student response to this assignment was positive, with follow-up conversations about “Rants and Raves” occurring inside and outside of class in small and large groups. My response to this assignment was a sense of achievement – my students were talking about the class material above and beyond the expectations of the course. I have since strengthened my description and approach to this “Rants or Raves” assignment and included a variation in my first year introductory course of 140 and 160 students. This report shares the process, including the rationale for choosing one-on-one versus a class conversation for this assignment.

Rationale

Although I teach relatively large classes (60 – 160 students), I want to interact one-on-one with my students in and out of the classroom because I believe that these more intimate conversations have the potential to positively influence the teaching and learning process. The one-on-one conversations that occur via email in my “Rants or Raves” assignments provide the students with opportunities to connect with me, their professor, and also to undertake in-depth reflection on topics of personal interest related to the course content.

As a professor, I benefit from these “Rants or Raves” assignments in several ways. First, I learn a little more about my students – particularly when they choose to share something personal. Second, I learn what the current ‘hot’ topics are related to the class content which has altered my plans for the term to accommodate these pertinent topics. Third, I potentially achieve an objective many professors have regarding the development of critical thinking skills. At the very least, students’ submissions reflect some consideration about a course-relevant topic and the influence it has on them. Finally, students are allowed to make their submissions anytime during the term, so my marking is somewhat spread out over the term. Please note, this assignment does not reduce the time I spend marking; in fact it has increased my marking time because I tend to give considerable feedback or respond to the conversation the students started. However as a result of the depth of many submissions, the discussions that ensued, the positive feedback from the students, and the novelty of each submission, I value my ‘marking time’.

My Experiences

I have used the “Rants or Raves” assignment in two different classes held in different terms. My first attempt was with a fourth year Health Education class which typically has between 60 and 80 students. In this class, students made four submissions on four different topics related to the course before the end of the term. The
The Future

I considered using an on-line data management system with which students could read and respond to one another’s posts, but when the semester was over and final grades were submitted, I asked the first group of students who submitted “Rants or Raves” their thoughts regarding making their “Rants or Raves” available on-line for the entire class. More than half of the students who responded said they would not have made the same personal, in-depth submissions, and that they preferred to share just with me their thoughts and/or feelings regarding a particular topic. Given that some of the topics we covered included bullying, depression and other mental health issues, dieting, eating disorders, date rape, sexuality, drinking and driving, and other potentially sensitive issues, I will continue with the email submissions of “Rants or Raves”.

I will certainly continue to use this assignment to promote one-on-one conversations via email with my students in first and fourth year. Though electronic correspondence cannot be viewed as a substitute for a face-to-face conversation, I have found merit in using this approach as one of the ways that I communicate with my students.

If you have questions about this assignment and how I use it in and out of class, feel free to contact me directly. Further, if you do something similar, I am eager to hear about your adventures and learn from your experiences, too.

Angela M. Kolen-Thompson

Angela M. Kolen-Thompson, a 3M National Teaching Fellow (2010), is an Associate Professor in the Department of Human Kinetics at St. Francis Xavier University. Her teaching and research interests are intertwined in that she is passionate about promoting physical activity and healthy living to children, youth, and young adults.
PEER-ASSISTED FEEDBACK: CONVERSATIONS IN THE CLASSROOM AND AMONGST THE RESEARCHERS

Ishita Siddiq, School of Medicine, Dalhousie University
Deborah Day, Graduate Programme in Counselling, Acadia University
Kim Blake, School of Medicine, Dalhousie University

ABSTRACT

The promise of formative assessment, or “assessment for learning” (Stiggins, 2002, p. 761), is well-documented in the field of education and in medical education specifically (Al-Haqwi, Al-Wahbi Abdulghani & van der Molen H.T., 2012; Blanch-Hartigan, 2011; Epstein, 2007; Eva, 2001; Mattheos, Nattestad, Falk-Nilsson & Attström, 2004; Tousignant & DesMarchais, 2002). There is considerable value placed on medical students’ capacity for reflection to enhance self-directed learning (Mann, Gordon & MacLeod, 2009), an aspect of formative assessment, and on teamwork (McNeil, Scicluna, Boyle, Grimm, Gibson & Jones, 2012) skills in medical education. Higher education has been characterized by infrequent, decontextualized assessment provided exclusively by faculty, this assessment lags behind other developments in higher education, despite acknowledgement of the vital role of formative assessment (Nicol & Macfarlane-Dick 2006; Yorke, 2003). Peer-Assisted Feedback (PAF) was developed to respond to these issues by providing an in-class process for efficient self, peer and tutor/faculty assessments for small-group, case-based tutorials in medical education (Siddiq, Day, Weimer & Blake 2012 a, b). PAF creates a round-table conversation with each student consecutively self-assessing, receiving peer responses and then a response from the tutor/faculty member. Our report explores attempts to implement the PAF formative assessment conversation into small group learning sessions in a medical education setting. The report outlines features of good conversation, focuses on the PAF process as a new type of round-table conversation within the small group tutorial process, and notes the role of conversations in the research team.

Good Assessment Depends on Good Conversation

Good conversation is built within a climate of confidence and comfort where authentic interest and purpose are prerequisites supported by a non-prescriptive process (De Virgilio & Ludema, 2009; Dubberly & Pangaro, 2009; Jacobs et al., 2011). The dynamic and reciprocal nature of conversations allows for different points of view while confirming understanding; these are essential elements of formative assessment (Nicol & Macfarlane-Dick, 2006; Stiggins, 2002; Yorke, 2003). Implementing modes of assessment which align with these criteria presents challenges including time limitations and faculty members’ perceived lack of training (Epstein, 2007). The value of formative assessment in providing specific, personalised feedback in medical education is acknowledged (Al-Haqwi et al., 2012; Blanch-Hartigan, 2011; Epstein, 2007; Eva, 2001; Mattheos et al., 2004; Tousignant & DesMarchais, 2002) and there is likewise value placed on medical students’ capacity for self-assessment (Mann et al., 2009). While formative assessment is intended to support self-directed learning, assessment in higher education has historically been an after-the-fact event, rather than an on-going conversation that supports students’ self-assessment and development (Nicol & Macfarlane-Dick, 2006).
Contrary to the features of effective conversation and formative assessment, medical students have reported assessment in medical tutorials as being infrequent offering generalised praise and providing no meaningful role for students and failing to support their development (Siddiq, Day & Blake, 2011). This prompted the development of Peer-Assisted Feedback.

The Peer-Assisted Feedback Conversation

Peer-Assisted Feedback (PAF) was developed (Siddiq et al., 2012 a, b) to overcome the barriers to effective formative assessment cited above. PAF facilitates a regular, efficient round-table exercise which combines self, peer, and faculty assessments in a conversational format which we believe addresses barriers to effective formative assessment. PAF sessions accompany the learning process in case-based learning tutorials rather than providing feedback as a decontextualized afterthought. The PAF approach thus moves away from infrequent, one-way feedback sessions provided exclusively by tutors/faculty, to a conversational format which involves students and takes place in conjunction with learning. The tutorials in which PAF is used involve small groups of eight students and are facilitated by a tutor, who may be a clinician, a basic scientist or an educator. Working in the case-based model, the group members are provided with a case and resources in advance of the tutorial session and undertake in-depth preparation on all aspects of the case.

Prior to implementing the PAF process in the small group tutorials, tutors are provided with training. An emphasis is placed on providing concrete and personalised feedback to students and supporting a climate where it is safe to share self and peer assessments. In a context where the small group tutorial meets three times a week, PAF is undertaken in the last 15 minutes of the final session of the week. The PAF process begins with an individual reflecting on his/her engagement in the tutorial experience over the week, considering strengths and areas for development. Next, other students respond to that student’s spoken evaluation, adding their own observations and extending the student’s self assessment. The tutor responds to the observations and helps the student to identify goals for the coming week. This process continues around the tutorial group in the same manner, with the tutor keeping brief notes regarding each student. Finally, the process concludes with the tutor’s reflections about his or her own engagement and general group functioning. Students then respond with feedback for the tutor. Both students and tutor are focused in their self-assessments and feedback so that the entire process is completed in 10-15 minutes.

The utility of PAF rests on effective conversational skills and group process is a central aspect of the assessments made. At best, PAF processes focus on concrete tasks for implementation in future tutorial sessions, such as self-monitoring of the extent of contributions in the tutorial sessions, and the creation of a climate where risk and growth are valued. The following exchange, while only a brief segment, typifies PAF:

Student A Self-Assessment: “I tended to chat a lot this week and take over the discussion”
Student B Response: “I notice that though you were contributing frequently, you have a great understanding of neuroscience and this helps on the difficult concepts.”
Tutor Response: “Thanks [name of student self-assessing], you are highly knowledgeable on this subject; perhaps waiting to come into the conversation until we get stuck could be a goal. You certainly explain the concepts well.

Our investigations of PAF have revealed the central importance of effective team dynamics in creating a learning community for successful conversations. Particular attention needs to be given to creating practical supports for both students and faculty to aid their development of
assessment conversation skills in the tutorial setting. For example, one area students and tutors struggle with is offering comments that are concrete and specific to the individual receiving feedback. Sets of model questions, a video showing a group working through the PAF process, and provision of a template for recording tutors’ observations have been identified as useful adjunct tools to a successful PAF conversation.

Conversations in the Research Team

Our medical education research team currently comprises three medical students (who are not involved in the tutorials we study) in years 2, 3 and 4, one physician/medical faculty member and one education faculty member. Each of us has uncovered key understandings of the PAF process at different points. For example, medical school culture emphasises displays of competence (MacLeod, 2011), making the establishment of the conditions for good formative assessment conversations challenging. Student research members more readily recognised student research participants’ efforts to position themselves as competent, distinct from contributing to learning in the group. It was the first-hand experience of being a student in a tutorial that supported analysis of the particulars in our data which pointed to this. The research team conversations are thus complementary to the conversations in the tutorials.

Conclusions

We have discussed two conversations, those in the PAF process and those of the research team. PAF has been shown to enhance formative assessment in a timely and feasible way, while the need for additional practical supports has been identified. Diversity in our research team contributes to rich conversations that illuminate patterns in the data from medical education tutorials and identify new directions for our research. Both conversations continue with a focus on: 1) further development of practical supports for PAF and, 2) deepening our understanding of the culture and context within which tutorial conversations are situated.

References


Advances in Health Science Education Theory and Practice, 14(4), 595-621.


Ishita Siddiq, B.Sc., M.Sc. is a fourth-year medical student at Dalhousie University. She has been involved in medical education research for the last three years; her research has been presented at international conferences on Medical Education. She may be reached at: isiddiq@dal.ca

Deborah Day, Ph.D., C.C.C. is an Associate Professor with the graduate programme in counselling at Acadia University and an adjunct faculty member in the Division of Medical Education at Dalhousie University. Her scholarly work includes teaching and learning in higher education with an emphasis on self-authorship, resilience and assessment. She may be reached at: deborah.day@acadiau.ca

Kim Blake, MB, MRCP, FRCPC, is Professor of Pediatrics at the IWK Children’s Health Centre and Dalhousie University, with a cross appointment to the Division of Medical Education. She is a former Associate Dean of the Undergraduate Medical Programme at Dalhousie University. Her scholarly interests span the continuum of medical education and are concerned with the development of communication, teamwork and self-assessment skills. She may be reached at: kblake@dal.ca
THE “FURIOUS FIVES”
These contributions were presented as five minute talks in the Black Box Theatre, St Thomas University.
The Creative Book Report: Fostering ‘right-brain thinking’ in a business curriculum

Jenny Baechler, Dalhousie University

In the second year of our MBA curriculum we offer a professional development course that challenges the students to develop and hone skills related to creativity, innovation and design. Within the course we work to design a number of opportunities where students are asked to step outside their comfort zone of technical business skills and explore the breadth of topics related to creative efforts. It can be challenging to find space in a business curriculum for assignments on these topics. Moreover, it can be equally as difficult for the somewhat competitive students to truly share their courageous efforts in creativity with each other.

With this in mind, our students are required to complete a creative book report. There are very few parameters around this assignment; the only main requirement is that it cannot be a traditional written summary/analysis of the book. It can be poetry, music, video, multimedia presentation, artwork – anything that demonstrates an understanding of the material in the book while stretching each student to truly explore their own creative capacity. The results of the creative book report are now presented annually at the Corporate Residency MBA Art Show – an initiative of the students in the class. This evening event, which includes displays of the art and design work and live presentations of the more dynamic pieces, is a celebration of their creativity.

For the purposes of our course, we anchor this assignment in Daniel Pink’s book A Whole New Mind. Within his book Pink presents six ‘senses’ that we all must develop in order to succeed in this new world where the creative and emphatic ‘right-brain’ thinker is in demand.

This furious 5 presentation will also show examples of the creative efforts of the students. Additionally I will provide context around the main themes present in A Whole New Mind and link these themes to core professional development competencies that we are working to foster within our young MBA students.

~ * ~

Experience Cube – An exercise for reducing conflict in team / group projects and in the classroom.

Scott Comber, Dalhousie University
See page 91 for the paper generated from this Furious Five presentation

~ * ~

Projected Themes: Using visual cues to inspire conversations in the classroom

Stephen Hare, Madeline Symonds Middle School

Students are often times at a loss as to how to generate connections in conversations to events that are outside their immediate present focus and frame. By providing visual cues and themes through powerpoint slides, students can practice switching from one theme to another in order to gain confidence in discussing a wide variety of topics. By doing so, they will improve their ability to make
intertextual connections between their own lives and these various themes. The teacher’s responsibility is to cycle through the themes on the slides with a remote control and to walk around the classroom in order to help facilitate the different conversations occurring in the student groups. From time to time, the teacher will engage in a classroom discussion by asking for the different connections the students have been making. At the end of the lesson, students will write their reflections in a journal in order to improve their self-awareness to their speaking style and their ability to make connections to the themes discussed.

~ * ~

The Importance of Saying “Hello”

Angela (Angie) M. Kolen-Thompson, St. Francis Xavier University

The first class, laboratory, or tutorial when we meet with our students sets the stage for the entire term or year. Have you considered how it is that you say ‘hello’ to your students? Have you thought about the design of that first class? That first opportunity to make an impression? Have you thought about what it is that you want to accomplish that first day – the stage you wish to set? This Furious Five session will share my thoughts, reflections, and experiences with saying ‘hello’ – aided by Koh Peters & Weisberg’s (2011) skillful direction regarding reflection.

The question or thought that guides my preparation for my first classes with either my large introductory Human Kinetics class of approximately 150 students or my relatively large fourth year classes of 65+ students is “What do I want the students to leave the classroom thinking?” Yes, I want my students to leave cognizant of what material is to be covered in their particular course, but I also want them to be aware that I will use a variety of interactive teaching methods to cover that material. I want them to know that they will be mentally and physically involved in their classes with me. More importantly, I want my students to leave that first class thinking this classroom is a safe space to be, that they will be recognized as individuals who are encouraged to think ‘outside the box’ and to express their thoughts, ask questions, and share experiences both inside and outside the classroom.

What does my first class look like? First, I do my best to greet as many students as I can entering the classroom with a bright smile and ‘hello, how are you today’ or ‘are you excited for this class?’ or “I am happy to see you in this class”. Regardless of the exact words chosen, it is an attempt to show that I care about my students as individuals. I also want my students to know how excited I am to be able to teach to them the content of this particular class (which is true – I LOVE the classes I teach, the material I get to cover, etc). When I formally begin my classes, I use PowerPoint slides - not to capture every word I say, but rather to guide me for what needs to be covered that day. Incidentally, I post all my PowerPoint slides online before my classes – except for the first day, because I want what I do in that first class to be a surprise. My first slide is “welcome”. For this slide, I start with “welcome to my class, you can expect ....”. Then I introduce myself using photographs and share a little bit about who I am, what I teach, what I research, and a highlight or two from my summer or Christmas vacation. I then ask the students to respond to a number of questions where ‘yes’ is indicated by standing; the questions differ for my first and fourth year classes. Frosh are asked what program they are in, what province they come from and what they might do in the future. Fourth year students are asked about future roles such as teaching, coaching, parenting, health care, etc – all relevant to the topics covered in their class. Next the frosh are asked to introduce themselves – not directly to me because my numbers are too large, but to one another. I ask them to say their name, where they are from, what they hope to do in the future and a highlight from their summer or Christmas vacation. Similarly, the fourth year students are given
questions to share responses with one another. Once the students settle, I ask the Frosh on their small cue card (distributed with their course outline) to write down a fear about being a student in this class. I then ask them to swap cards, read that card; swap cards again, read that card; swap again, then I ask for volunteers to read aloud the card in their hand. After I review the course outline, the final welcoming task for the Frosh is on their larger cue card to respond on one side to “What do you expect from an instructor who gives 100% to this course?” and on the other side “What do you expect to see your peers doing if they were giving 100% to this course?” My fourth year students respond to: What do you plan on doing when you graduate? What will you do to ensure success in this class? What can I do to help you be successful in this class? To me healthy is ... For both classes, I summarize the responses in a follow up class. My experiences with these sorts of ‘hellos’ has been that my classes are interactive and engaging and students tell me they want to come to my classes – even at 8:15 a.m.!

References

~ * ~

Using the primary literature to promote conversation in the classroom

Erika F. Merschrod, Memorial University of Newfoundland

The primary research literature may seem inaccessible to undergraduate and even early graduate students. Nonetheless, it provides a wealth of images and examples of current practice to illustrate foundational points in class. Incorporating journal articles into classroom activities is particularly easy in today’s digital age, and I try to start every class in upper-level chemistry courses with an article brought in by a student. (I plan to expand this to a 3rd year chemistry course this fall, and to 2nd year courses as my teaching assignments permit.)

This practice began simply to ensure that a group of senior-level students had completed a literature searching exercise. There were so many beneficial “side effects”, however, that I have now made this a regular activity throughout the term. In addition to the fresh (and student-driven) content the articles provide, the activity also turns the reins over to the students, setting a conversational and participatory tone that carries through the entire class session.

In this 5-minute session I will provide some brief tips for implementing this activity (including dealing with jargon and poorly written papers, and helping students surmount their fear of speaking out in class) and take questions. I would be quite interested to know how people think this would work outside the natural sciences.
ABSTRACTS
From Indian Ocean Atrocity to Francophone Fiction: Conversational Approaches
Rohini Bannerjee - Modern Languages & Classics, Saint Mary’s University

Heterogeneity and diversity are the main points of discussion when exploring the francophone presence in the Indian Ocean. However, within the idyllic geography of the Indian Ocean islands and their contrasting histories, lies a present day atrocity. Islanders from the British Indian Ocean Territory (BIOT) of the Chagos Islands and in particular, Diego Garcia, were expelled by the British government and relocated to neighbouring Mauritius and the Seychelles between 1967 and 1973 so as to make way for US military operations. Despite continued efforts, including 2008 Nobel Prize Winner in Literature Jean –Marie Gustave LeClézio’s attempt to summon the attention of fellow 2009 Nobel Peace Prize winner US President Barack Obama, Chagossians have been denied the right to return to their home because of the increasingly strategic importance of the islands as a refueling stop and most recently as a central base for air strikes towards Afghanistan and Iraq.

When students first read about this in Shenaz Patel’s 2005 novel Le Silence du Chagos, they are shocked. They reread the text, searching for answers but ultimately turn to conversation, finding ways to discuss, question and ultimately cope with what they have just learned. In this presentation/discussion, I will share some of the in-class conversations had by students and demonstrate how the pre-school mantra of “using our words” in this 4000 level French literature course reaches beyond the classroom and Francophonie, and in fact affects how our students process the everyday atrocities in their backyard and around the world.

~ * ~

Gerard Beirne - English, University of New Brunswick

Most students do not have a clear understanding of why they are taking the courses they have enrolled in or what they are doing while they are attending them. In short, they are constantly in a state of confusion. Indeed it could be argued that we as instructors are not always fully aware of why we are teaching the courses we are or what we are truly doing in the classroom. Fortunately, confusion is a useful state to learn from. “What Am I Doing Here?” explores a Meta-Cognitive approach to learning. Students can be taught to productively manage their confusion seeing it as a state of cognitive disequilibrium leading them to recognize what they have yet to understand and creating opportunities for deeper learning of conceptually difficult content. They learn to identify the true goals and objectives of their education and the importance and relevance of what they are being taught to the outcomes they seek. As instructors, we can allow students to become more strategic thinkers by helping them to understand not simply the material we present them with but the way they process information. In effect, they learn how to learn. Through small group work and facilitated discussion, this session investigates the potential use of metacognitive strategies including self-regulation and the sequential processes of planning and monitoring that the students and instructors alike can use to manage and control their cognitive activities to ensure that their short and long-term goals are being successfully met.
The Cybernetic Conversation: An NLP (euro-linguistic programming) Approach Towards Greater Teaching Effectiveness
Gerard Beirne - English, University of New Brunswick

NLP (modeling excellence in human behaviour) is a field of practice and innovation with a wide range of tools and techniques that learners and professional educators can apply within formal and informal educational settings. The teacher-learner relationship is a cybernetic loop, not a transmission of information from one individual to another but a dynamic process in which meaning is constructed through reciprocal feedback. People act according to the way they understand and represent the world.

Through discussion and group work, this session explores the NLP approach to teaching and learning.

It explains the systematic relationships between your language and internal processing and how it affects behaviour and the behaviour of others around you. Awareness of one's own language patterns and behaviour as a teacher, and sensitivity to their influence upon a student's internal representations, are crucial to effective teaching. Skills, beliefs and behaviours are all learnt. These learnings occur both consciously and unconsciously. Furthermore, a student's capacity to learn is influenced strongly by their neuro-physiological 'state' (for example, being in a state of curiosity is clearly more advantageous than a state of boredom), and by their beliefs about learning and about themselves as learners (beliefs that one is capable of learning and that learning is worthwhile being more useful than their opposites). It is vital, therefore, that as teachers we create states and a belief system conducive to learning through our own language and behaviour while providing our students with a means to comprehend the material being taught.

~ * ~

Teaching Ideas that Matter Using the Human Library Methodology
Alan Brown - Sociology & Anthropology, Mount Saint Vincent University
Kelsey Iceton - Research Assistant/Student, Mount Saint Vincent University

As universities struggle with having to do more with less, an unfortunate consequence has been increased class size and greater standardization of content. This rationalization of teaching resources and normalization of the classroom experience makes it difficult to engage in conversations with students in meaningful ways. To overcome these difficulties, I used the Human Library Methodology (HLM) as part of my recent Introduction to Sociology course. The interactive ‘Human Library’ originated in Denmark in 2000 as a response to racially motivated youth violence. Under the format, students (“readers”) are invited to learn more about the life story of any number of volunteer “books” and can pose questions to and engage in discussion with the “books” to enhance the learning experience. This event was an opportunity to teach core sociological concepts to first-year students and contribute to the process of breaking down barriers and opening up minds to the diversity and richness of communities by challenging
judgments and assumptions about individuals from different backgrounds. This approach is an excellent illustration of the core principles of Critical and Dialogical Pedagogy.

This paper will discuss the goals and objectives of the exercise, paying particular attention to how it was grounded in the rest of the course materials. Specific attention will be given to student engagement, evaluation and community outreach. Finally, I will discuss the process by which others may adopt this unique pedagogical tool in their own classes and campuses.

~ * ~

**Teaching First Year Student with an eye on Persistence**
David Creelman - Humanities & Languages, University of New Brunswick

I’ve taught introductory English courses for twenty years, but until I started teaching UNB’s Introductory Skill’s Course, I did not appreciate how important it is to adopt the following five principles in both small and large first-year courses in order to help students engage, learn, succeed, and persist. My presentation will draw from the literature in the field of retention, and provide practical examples of the following principles, nearly all of which have to do with opening up conversations within the classroom.

1) We need to employ active learning strategies and include moments when the students participate through the use of discussion groups, debates, clickers, and/or games of various sorts. 2) We should set a significant assignment which can be marked and returned by the sixth week of the each term, so that new students can tell whether they are working sufficiently hard to achieve the marks they want. 3) We need to talk regularly and explicitly about library resources and show students during our classes where we have gleaned our information. 4) In every course students can be encouraged to write, even if the writing is simply one minute response papers, short paragraphs about key ideas, or on-line journals. 5) We need to speak about why reading, studying, researching, and writing is meaningful for us, so that students can understand why knowledge and learning is not just a means to an end, but an inherently satisfying life practice.

~ * ~

**The Social Syllabus: Considering uses of Social Media for Invigorating Course Conversations**
Lauren Cruikshank - Culture & Language Studies, University of New Brunswick

*Social Media isn’t the end-all-be-all, but it offers (us) unparalleled opportunity to participate in relevant ways.* - Matt Dickman

As the quote above highlights, social media have had enormous impacts on global culture, as well as sparked incredible amounts of hype about their potential and importance. How can we, as educators, think carefully about social media and choose to use or not use certain kinds of social media in our learning endeavors with students? This session will open up a conversation
about the potential advantages and disadvantages of incorporating social media elements into your courses, not as addons or afterthoughts, but as a carefully considered component in your course planning. Interesting new research on the impact of social media for extending course-related conversations, both online and in the classroom itself, provides instructors with plenty to think about and talk about in considering social media applications for university education. Lessons learned, case studies, and recommended practices for engaging students with course material through social media channels such as Facebook, Twitter, Flickr, YouTube, Pinterest and blog platforms as well as Learning Management Systems, such as Blackboard, Moodle or Desire2Learn, will be shared in this presentation/discussion. Session attendees are very welcome to bring their own successes, struggles and individual perspectives to this conversation about the benefits, drawbacks and issues to consider when setting out to craft a more social syllabus for your students.

~ * ~

So this is My New Learning Journal (A 1:1 iPad Experience)
Gregory Fleet - Business, University of New Brunswick

In the fall of 2012, 45 senior undergraduates were provided with iPad 2s for the duration of the term. The course was completely re-structured so that the use of this mobile device was maximized. Reading assignments were electronic with tools to bookmark and share learning with classmates (from “likes” to sharing important passages). Homework was completed using the iPad and shared with instructor and/or classmates. In class assignments (individual and team-based) were shared with the class using screen-sharing from the iPad to the room’s projector. Students were also encouraged to explore other ways to use the iPad (e.g., social media or other applications they are familiar and comfortable with using). This session will summarize this experience to date. Students will have completed at least two questionnaire surveys (pre-study and mid-course). In class reflections, focus group sessions and online comments will also be summarized. The goal of the research is to explore the role mobile technology can play in active, social, constructivist learning. In all, a very ambitious project that is bound to provide compelling insights.

~ * ~

Let’s Listen to Understand How Hearing Loss Affects Communication
Jayne Glenn - Adult Education, University of New Brunswick

One in ten Canadians are affected by hearing loss. You may have a co-worker, a student or a family member who has hearing loss and this workshop will provide strategies to create better communication for all. Facts about hearing loss are presented and then participants are broken into small groups and given 5 minutes to discuss what challenges they believe are present for a hard of hearing individual in a school setting by either a student or fellow educator who has a hearing loss. Through the use of flip charts, each group will then present their challenges. Discussion follows and additional challenges that may not have been brought up are then presented.
Examples of challenges faced by the presenter, a hard of hearing individual, are detailed with humorous but enlightening stories.

Participants then participate in an unfair hearing test which simulates challenges experienced by a hard of hearing individual. Participants are asked to write down the words they hear.

Discussion follows about the difficulties the attendees may have experienced with this communication.

Strategies and suggestions about how best to accommodate a hard of hearing individual are explored, again by participation in small group brainstorming. Discussion about simple techniques to aid in communicate will provide attendees with solutions that aid in communication.

~ * ~

The 30-Minute Talking Cure: How to Grade, Troubleshoot, & Motivate in a Single Move
Clare Goulet - English, Mount Saint Vincent University

“A doctor is no longer at his intellectual peak just because he knows the best new methods, and is practised in them;...he must also have a talent for conversation that must adapt to every individual and pluck his heart out.” – Friedrich Nietzsche

Recent research on effective conversation in UK medical practice—including the 2008 Healthy Conversations project—determined that “[t]he script that shapes our...relationships needs to change.” In medical practice, the most advanced treatment still begins with one-to-one conversation; in university education, real-time conversations are often seen as optional, a style preference, or replaceable by other technologies. This presentation will illustrate how a single individual midterm conversation that risks genuine dialogue can evaluate work, clarify subject matter, troubleshoot issues, personalize the course, motivate the student for the work ahead, and do this with speed and pleasure. Health communications and dialogue theory provide five structural guideposts—accident, emotion, gesture, coherence, and comprehension—with an English course (distance and classroom) serving as case example. Relaxed tutor-student meetings were once central to university education; reviving aspects of this practice at targeted points can transform your office hours into Christopher Poulos’s extraordinary dialogic “turning points” and a midterm stack of papers into pleasurable days of intensive, goal-oriented, meaningful conversation and improved student work—the simplest mode of delivering the ‘personalized, student-centered learning’ increasingly called for.

~ * ~

Using Technology to Support Student Learning: Understanding User Perceptions through Media Technology and Sociological Theory
Wayne Hansen - Manager Student Technology, University of New Brunswick
Karen Furlong - Senior Teaching Associate, University of New Brunswick

The University of New Brunswick in Saint John recently purchased a Nursing Central site license that is intended to provide prompt access to information to faculty and Baccalaureate of Nursing (BN) students, within a variety of clinical settings. Although literature findings provide a significant amount of anecdotal data supporting the usability of mobile devices within BN
programs, empirical evidence is rather limited with a lack of consistency as to whether or not such technologies are perceived as helpful. This presentation will include preliminary findings from a research project evaluating the utility of this resource. Using sociological frameworks researchers will consider how this new resource may benefit learning while simultaneously allowing for the emergence of corresponding disadvantages. This critique examines the concept of interpersonal information as researchers seek to understand how this resources influences social engagement among students while caring for patients and their families.

~ * ~

Using Visual Cues to Inspire Conversations in the Classroom
Stephen Hare - Teacher, Madeline Symonds Middle School

Students are often times at a loss as to how to generate connections in conversations to events that are outside their immediate present focus and frame. By providing visual cues and themes through powerpoint slides, students can practice switching from one theme to another in order to gain confidence in discussing a wide variety of topics. By doing so, they will improve their ability to make intertextual connections between their own lives and these various themes. The teacher’s responsibility is to cycle through the themes on the slides with a remote control and to walk around the classroom in order to help facilitate the different conversations occurring in the student groups. From time to time, the teacher will engage in a classroom discussion by asking for the different connections the students have been making. At the end of the lesson, students will write their reflections in a journal in order to improve their self-awareness to their speaking style and their ability to make connections to the themes discussed.

~ * ~

People Love Talking About Themselves: Encouraging Students to Perceive University Education as Exploration of Self
Mark Henderson - Arts, University of New Brunswick

To teach is to be sensitive to audience. In past decades, some homogeneity in the classroom has allowed university teachers to imagine that they are addressing students represented by the highest point of the bell curve in subsequent performance assessment. But to whom do we teach when classroom diversity makes imagining a common, middle group nearly impossible? One solution is to give up trying to teach to the many by choosing to teach to an audience of one. By setting common expectations for class participation, requiring weekly preparatory email messages, and encouraging individual and small group meetings, I attempt to help students identify challenges and develop strategies to allow them to learn and me to measure performance against a common standard.

An effective approach for me has been to encourage students to interpret assignments as opportunities for self-expression in the context of exploring and developing a sense of self through following a university curriculum. My best examples of success are students who leave
my courses assessing their education by what it makes of them rather than by what it is worth to them.

~ * ~

**Teaching Triangles: Three Way Conversations**
Eileen Herteis - Teaching & Learning Centre, Mount Allison University

Some teaching conversations blossom unaided; however, others need a little ‘trellis’ to support them! *Teaching Triangles* are one way to provide such support. A Triangle consists of three teaching colleagues; each visits a class taught by the two others—not to evaluate the colleagues’ teaching but to reflect on the experience. Triangle partners share their learning through several kinds of collegial conversations.

This session will describe Mount Allison’s *Teaching Triangles* program and outline its simple organizational structure. We’ll look at past Triangle colleagues’ comments and experiences, which uncover several unexpected outcomes of the program. We will have a conversation about how to make Triangles work on your campus, and you will leave with all of the materials you need to do so.

~ * ~

**Flipping Your Classroom: Using Technology and Blended Classroom Techniques to Support Your Learners**
Diane P. Janes - Education, Cape Breton University

A blended learning approach combines face to face classroom methods with computer-mediated activities to form an integrated instructional approach. In the past, digital materials have served in a supplementary role, helping to support face to face instruction` (Penn State, 2009, [http://weblearning.psu.edu/blended-learning-initiative/what_is_blended_learning](http://weblearning.psu.edu/blended-learning-initiative/what_is_blended_learning)). Modern Blended Learning moves that support to the core of your classroom delivery, and each supports the other…the questions are why blend and how to blend to enhance the best of both delivery models. Current ideas of ‘flipping the classroom’ will also be discussed.

~ * ~

**Voices Heard: Changing the institutional culture at university**
Albert Johnson, Memorial University
David Philpott, Memorial University

In May 2011, the Senate of Memorial University unanimously ratified an institutional framework for teaching and learning. The significant level of engagement and enthusiasm that fuelled the highly consultative process is continuing to drive several projects initiated by recommendations suggested in the Teaching and Learning Framework report. The momentum that was generated during the initial process has carried over to the development of the First Year Success Program and the Teaching Skills Enhancement Program. Planning has begun on the next phase of the process that will focus on student and educator engagement in teaching and learning. Senior management of the university has showed
substantial support by providing resources to modernize numerous classrooms and lecture theatres throughout the university. The tag line for the development of the framework was, “Join the conversation about teaching and learning.” That pan-university conversation is continuing with more participants than ever before. In this interactive session, presenters will demonstrate the highly consultative nature of the process used at Memorial University to engage students, faculty and staff in conversations about teaching and learning and how voices heard become significant partners in cultural change within an institution.

Presenters will actively engage the participants in discussion through small group activities and whole group discussions on the topic of conversations and institutional change. They will use as a backdrop for these discussions the experience of developing the Teaching and Learning Framework at Memorial University, outline how a strong sense of community has been established around teaching and learning, and highlight how the community has rallied to support the first three initiatives that were instigated through the recommendations in the Teaching and Learning Framework report.

~ * ~

Using Yammer Groups and External Yammer Communities for Teaching and Collaboration
David N. Kristie - Biology, Acadia University

In 2008 Bill Gates predicted that, “Social networking-type applications will become as ubiquitous in the workplace as Microsoft Office tools and will likely replace email as the dominant form of corporate communication.” These internal networks, often called Social Intranets or Enterprise Social Networks (ESNs) provide a secure Facebook-like environment for communication and collaboration. Membership in ESNs is limited to people within the corporate or institutional email domain. ESNs such as Yammer, Chatter and Socialcast are transforming internal communications in businesses and are gradually becoming more widely used in government, research and higher education. Yammer was recently acquired by Microsoft and integrated into the Office Division, converting Yammer from a fringe player to a mainstream technology. In this presentation I will discuss the use of internal Yammer groups, and external Yammer communities for teaching, and collaboration. If facilities permit, participants will be invited to join and interact in an external Yammer community.

~ * ~

Teaching Critical Thinking in the Globalized Classroom
Scott MacMillan - Business & Tourism, Mount Saint Vincent University

The teaching of critical thinking skills has historically been a major challenge in higher education but is even more so in the current university classroom. Today’s students come from a wide variety of backgrounds, are described as drowning in electronic “information smog”, and have had limited exposure to critical thinking education. Additionally, the internationally diverse classroom makes it difficult to engage in topics that all students can relate to. The teaching of critical thinking is more important than ever as it is related to the many global issues we are
struggling with today, such as social responsibility, globalization, the nature of work, and social justice issues. However, in order to analyze and discuss these issues properly, students must be able to think critically. For example, students cannot make ethical decisions if they can't analyze an issue from different perspectives, have empathy for others, and take into account the effects of their actions on other people. Increasing the critical thinking ability of students may impact ethical behaviour far more than anything else we could do. This session will discuss the challenges of teaching critical thinking in today’s globalized classroom and suggest strategies such as blogs, opinion essays, class debates (e.g., Should we form a North American union?) and open-ended group discussion projects (e.g., What will the world look like in 50 years?) for stimulating student’s critical thinking.

~ * ~

Layered Learning and the Flipped Classroom
Sharon Murray, St. Thomas University

This session will involve some presentation but mostly participation and discussion. The area of classroom discussion focuses on layered learning and flipping the classroom. Flipping the class involves the use of technology to engage students outside the classroom on what is often passively presented during class time – in some cases, classwork becoming homework and homework becoming classwork. When a class is flipped time spent in the classroom can center on collaboration, discussion, and/or actively working on related tasks. This active construction of knowledge focusing on analyzing, evaluating and/or creating is most often referred to as layered learning. Flipping the classroom is a relatively new instructional approach to layered learning in its use of the Internet and media rich resources. This session will look at these strategies for learning and teaching within the time frame of a single class. Handouts will be provided and discussion encouraged.

~ * ~

Learning and Assessing Social Interaction
Ted Needham - Renaissance College, University of New Brunswick

Social Interaction is the ability to effectively interact with others using appropriate skills, attitudes and knowledge. All of us ‘interact’ with others and we ‘think’ about those interactions. Social interaction is one of Renaissance College’s six learning outcomes and we decompose this ability into 2 dimensions - being able to work effectively in a team and two, being able to effectively interact interpersonally, that is one-on-one. In this session, the assessment structure for both dimensions will be presented, a framework for the interpersonal dimension explored, and respective learning and assessment activities discovered. After setting the context, the session will be a conversation about the critical dimensions that should comprise an interpersonal social interaction framework, and a brainstorming session to determine methods for helping students learn to be effective and thoughtful.
The meaning of the term literacy has evolved to encompass its importance in subject areas outside of language courses. Many high school and university students struggle to read textbooks and other course materials and to write successfully in content area courses, such as math, sciences, and history. The ability of students to acquire knowledge is frequently hindered by texts that are beyond their reading ability. In the Bachelor of Education program at St. Francis Xavier University, a course entitled *Literacy in the Content Areas* is a compulsory course for teacher candidates preparing to become high school teachers. The purpose of this course is to provide teacher candidates with many ways to create an instructional environment that nurtures literacy and learning in subject areas. As part of the course, teacher candidates experience a variety of ways to use literacy strategies to help their students deepen understanding of concepts particular to subject areas. In this presentation we focus upon our use of learning log discussion groups and peer teaching and how these two teaching methods place teacher candidates in learning situations in which they are responsible for their own learning as well as the learning of others. The learning logs and peer teaching are strategies that could be adapted for use in other university courses.

~ * ~

I Don’t Want to Talk about it!
Rosemary Polegato, Mount Allison University

Let’s face it - there are teaching and learning issues that we would rather not have to talk about! These conversations may be futile, unnerving, annoying or just plain energy zappers. Which conversations take the shine off your day? Perhaps it’s conversations about plagiarism, late assignments, asking for a wee bit of funding, overcrowded classrooms or computer problems? Come to this session to talk about your pet peeve, and vent a bit. Bring along your sense of humour; we’ll all need it! We’ll close by deciding on a creative way to clear our heads of our collection of negative conversations.

~ * ~

Autonomy of Learners in Intensive Courses
Rosemary Polegato, Mount Allison University
Eileen Herteis - Teaching Centre, Mount Allison University

Controversy about the merits and shortcomings of various degrees of course intensity abounds! This session reports on preliminary findings from a small pilot study comparing learners’
characteristics and their experience in intensive and regular undergraduate courses. This session will focus on learner autonomy (Macaskill & Taylor, 2010). Specifically, does learner autonomy change at Time 1 (beginning of a course) compared to Time 2 (end of a course) in intensive undergraduate courses? And does autonomy predict academic performance based on grades? This research project was approved by the Research Ethics Board, Mount Allison University. Data collection procedures ensured voluntary participation, confidentiality, and instructor impartiality.

~ * ~

**Peer Assisted Learning (PAL): Insights from Undergraduate Student Leaders**
Lisa Sharp - Science, University of New Brunswick
Gabrielle Maillet - Science Student, University of New Brunswick
Eric Manuel, Science Student, University of New Brunswick
Elias Oussedik, Science Student, University of New Brunswick

The Peer Assisted Learning (PAL) program is UNB’s version of Supplemental Instruction. The PAL program is structured to have PAL leaders (upper-level undergraduate students) attend courses, coordinate with course instructors, and offer a series of highly engaging learning sessions to help students from across campus succeed in first-year Science courses. In this presentation, PAL leaders will solicit audience participation to reenact a typical PAL session. The PAL leaders will (1) facilitate a discussion regarding the unique benefits of PAL, as compared to a regular tutorial system, and will (2) propose a variety of interesting student engagement strategies, including some that work well in Science and related disciplines. The PAL leaders will end by outlining the importance of closing the session, and will provide a few examples of how to do so effectively.

~ * ~

**Technology for Learning - Mixing Generations & Learning Styles**
Wayne Solomon - Law Student, University of New Brunswick

Using a mixture of presentations, small group exercise and discussions, this session will highlight the challenges of using technology to engage the learner when the students are of various age groups. Millenials’ generally love technology, but what about everyone else? From the baby boomers to generations x and y, how do they learn and how can technology be used to assist in the learning process?

It is well understood that different students all have different learning styles, but add students from different generations and technology to the mix, and the challenge is further multiplied. So how do you aid in the learning but still keep everyone interested? By using a mix of teaching styles with a mix of technology you will engage a broader spectrum of students and increase their desire to learn. This isn’t just about using the tools in the classroom; it’s about getting students to use technology to engage
in the learning process. Ideas on using Google, twitter, library resources and more, will not only be discussed but will actually be used in this interactive session. Attend this workshop, see what works with different age groups and take away some new tools you can use right away!

~ * ~

Deconstructing the Divide between Classroom Dialogue and the “Real World”
Rajeev Venugopal - Political Science, University of New Brunswick

Based on my experiences in government and academia I assign great importance to the intersection of the theoretical and the practical. While the term paper is a valuable and historic tool used to integrate scholarship with personal expression, students often complain its completion is a pyrrhic victory and that often, little is learned in the mad dash towards its completion. In teaching a small-sized seminar course on Canadian political systems to upper year undergraduate students, I challenged the class to forgo the traditional term paper and instead complete a “Public Engagement Initiative” in which they would adopt a hypothesis or line of argument/thought (as they would with a paper), and advance it in the “real world,” sharing their outcomes in the form of a final report. Students have been fully engaged in this “conversation” with the world around them, and have undertaken projects ranging from submission of thoughtful policy briefs to government legislative processes, to writing highly provocative essays in the “Facts and Opinions” section of the *Globe & Mail*, to organizing demonstrations in front of the New Brunswick Legislative Assembly. I would like to share my experiences with this effective and meaningful method of teaching with conference participants, and stimulate a robust conversation on how we can break down the barriers between the classroom and the community. My presentation will consist of a brief presentation followed by an open-floor discussion.

~ * ~

Electronic Portfolios as instructional and Assessment Tools: Planning for Assignments, Courses and Programs
Shaunda Wood - Education, St. Thomas University

Electronic portfolios [E-Portfolios] are becoming important instructional and assessment tools in the public school system as well as higher education (Clarke-Midura & Dede, 2010; Palomba & Banta, 1999). In some instances, they are the sole method of performance assessment or just one useful tool in the professor’s teaching tool kit. E-Portfolios are a collection of student work saved electronically to a learning management system [LMS] or wiki that has been selected and organized to illustrate samples of the students’ best work. A common practice is to use the E-Portfolio throughout a course or program, demonstrating student improvement and reflection, while assessing and showcasing the student’s overall performance with the final product.

I will discuss planning for the use of E-portfolios including: purpose(s) of portfolios; selecting types of entries to include; how to develop methods to evaluate the entries; how to establish, maintain
and use the E-portfolio; and suggest ways to evaluate the E-Portfolio. Best practices and lessons learned will be discussed. In addition, a list of useful resources, websites, and research will be provided.

**References:**
PARTICIPANTS CONTACT INFORMATION

Diana Austin  
English  
University of New Brunswick  
(506)458-7400  
daustin@unb.ca

Jenny Baechler  
Business Administration  
Dalhousie University  
(902)494-3321  
jenny.baechler@dal.ca

Rohini Bannerjee  
Modern Languages & Classics  
Saint Mary’s University  
(902)420-5814  
rohini.bannerjee@smu.ca

Gerard Beirne  
English  
University of New Brunswick  
(506)453-4676  
gbeirne@unb.ca

Dr. Alan Brown  
Department of Sociology and Anthropology  
Mount Saint Vincent University  
(902)457-6239  
alan.brown@msvu.ca

Scott Comber, PhD  
Assistant Professor  
Business Administration  
Dalhousie University  
(902)494-7820  
scott.comber@dal.ca

David Creelman  
Humanities & Languages  
University of New Brunswick  
(506)648-5648  
creelman@unb.ca

Lauren Cruikshank  
Culture & Language Studies  
University of New Brunswick  
(506)447-3322  
l.cruikshank@unb.ca

Katherine Darvesh  
Chemistry  
Mount Saint Vincent University  
(902)457-6544  
katherine.darvesh@msvu.ca

Deborah Day  
Education  
Acadia University  
(902)585-1132  
deborah.day@acadiau.ca

Stephen Dutcher  
History  
University of New Brunswick  
(506) 458-7199  
sdutcher@unb.ca

Michelle Eskritt  
Psychology  
Mount Saint Vincent University  
(902)457-6593  
michelle.eskritt@msvu.ca

Gregory Fleet  
Business  
University of New Brunswick  
(506)648-5740  
fleet@unb.ca

Karen Furlong  
Nursing & Health Sciences  
University of New Brunswick  
(506)648-5720  
kfurlong@unb.ca
Jayne Glenn
Adult Education
University of New Brunswick
(506)476-9110
c68i9@unb.ca

Clare Goulet
English
Mount Saint Vincent University
clare.goulet@msvu

Reina Green
English
Mount Saint Vincent University
(902)457-6231
reina.green@msvu.ca

Wayne Hansen
Manager Student Technology
University of New Brunswick
(506)648-5800
whansen@unb.ca

Andrew Hare
Mathematics & Computing Science
Saint Mary's University
(902)491-6427
andrew.hare@smu.ca

Stephen Hare
Teacher
Madeline Symonds Middle School
share@hrsb.ca

Mark Henderson
Faculty of Arts
University of New Brunswick
hds@nbnet.nb.ca

Eileen Herteis
Teaching Centre
Mount Allison University
(506)364-2652
pctc@mta.ca

Kelsey Iceton
Mount Saint Vincent University
Halifax, NS
kelsey.iceton@mta.ca

Barbara Jamieson
Nursing
Cape Breton University
(902)563-1965
barb_jamieson@cbu.ca

Diane P. Janes, PhD
Education
Cape Breton University
(902)563-1236
diane_janes@cbu.ca

Albert Johnson
Distance Education, Learning and Teaching Support (DELTs)
Memorial University
(709) 864-7697
albertj@mun.ca

Angela M. Kolen-Thompson
Human Kinetics
St. Francis Xavier University
(902)867-3540
Angela.Thompson@stfx.ca

David N. Kristie
Biology
Acadia University
david.kristie@acadiau.ca

Martin Kutnowski
Fine Arts Programme
St. Thomas University
(506)460-0375
martink@stu.ca
www.contrapunctus.com

Kat Lord
Masters Candidate
Memorial University
(709)740-3885
klord@mun.ca

Peter MacIntyre
Psychology
Cape Breton University
(902)563-1315
peter_macintyre@cbu.ca
Kathleen McConnell  
English  
St. Thomas University  
(506)460-0394  
kathymac@stu.ca

Erika Merschrod  
Chemistry  
Memorial University  
(709)864-8765  
erika@mun.ca

Jennifer Mitton Kükner  
Education  
St. Francis Xavier University  
(902)968-0059  
jmitton@stfx.ca

Scott MacMillan  
Business & Tourism  
Mount Saint Vincent University  
(902)457-5991  
scott.macmillan@msvu.ca

Sharon Murray  
Education  
St. Thomas University  
(506)452-0473  
murray@stu.ca

Anne Murray Orr  
Education  
St. Francis Xavier University  
(902)867-5453  
aorr@stfx.ca

Ted Needham  
Renaissance College  
University of New Brunswick  
(506)447-3092  
Needham@unb.ca

David Philpott  
Faculty of Education  
Memorial University  
(709) 864-3506  
philpott@mun.ca

Rosemary Polegato  
Commerce  
Mount Allison University  
(506)364-2322  
rpolegato@mta.ca

Sheila Profit  
Nursing  
Cape Breton University  
(902)563-1410  
sheila_profit@cbu.ca

Lisa Sharp  
Science  
University of New Brunswick  
(506)452-6199  
lsharp@unb.ca

Wayne Solomon  
Law Student  
University of New Brunswick  
(506)238-4645  
wayne.solomon@unb.ca

Heather Sparling  
History & Culture  
Cape Breton University  
(902)563-1242  
heather_sparling@cbu.ca

Rajeev Venugopal  
Political Science  
University of New Brunswick  
(506)453-5434  
raj.venugopal@gnb.ca

Grant Williams  
Education  
St. Thomas University  
(506)476-1273  
grantw@stu.ca

Shaunda Wood  
Education  
St. Thomas University  
(506)453-7212  
swood@stu.ca