Light ON TEACHING

2013-14 ISSUE

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TEXTING, IN A NEW, OLD FASHIONED WAY

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Teaching CENTRE

Igniting the Light

A Message from the Director

It is with great pleasure that I welcome you to the inaugural issue of the Teaching Centre magazine. The launch of the Teaching Centre on March 4th, 2013 signified an important reaffirmation of the University of Lethbridge's commitment to excellence in teaching and learning. Through its commitment to scholarship, research, and best practices in teaching and learning, the Teaching Centre strives to promote and enhance the professional development of university level instruction.

Although less than a year old, the Teaching Centre has several professional development opportunities available to all U of L instructors. I thought I would take this opportunity to highlight a few new initiatives we are proud to offer.

The new Teaching Centre website contains a growing library of teaching resources focused on specific pedagogical skills ranging from assessment to classroom management.

The Instructional Skills Workshop (ISW) is a four-day workshop, offered each summer, focused on constructive strategies and individualized peer feedback to help you refine your own approach to teaching.

(He)art of Teaching is a casual, confidential, drop-in peer mentoring session offered throughout the year providing instructors an opportunity to put your feet up and talk to other teachers who've been there.

The New Faculty Teaching Development (NFTD) program is intended to provide new faculty with the professional skills, understanding, competencies, and confidence to demonstrate excellence in teaching and to provide exemplary learning opportunities for students.

New for the 2013/2014 academic year the Teaching Development Workshops and Tutorial sessions provide all faculty with quality collegial and collaborative professional development opportunities focused on understanding and praxis concomitant with exemplary teaching and learning.

The Teaching Centre magazine is our newest initiative and an extension of our belief in the importance of scholarly research and publication on teaching and learning at the U of L. This yearly publication provides an opportunity for U of L faculty to engage in the scholarship of teaching and learning, share best practices, and present their views, opinions, and research on teaching at the University of Lethbridge.

This is the first year of the magazine and we are grateful to the hard work of our colleagues who helped to bring this idea to fruition. I want to encourage everyone to provide me with your feedback on the magazine and how we can improve it for next year. I hope you enjoy reading the articles and columns within, and consider writing your own article for next years publication.

WHAT MAKES A CLASSROOM AN EFFECTIVE LEARNING ENVIRONMENT?

by Dr. Tom Perks

In early 2012 the Learning Environment Evaluation Working Group (LEEWG) embarked on a pilot project to examine classroom space at the University of Lethbridge. Initiated by the Teaching Centre, the impetus for forming this collaborative group of staff, faculty, and students from across campus was to promote the improvement of current teaching and learning spaces at the University and to inform the process of planning for future classroom construction and renovation. The project represents an initial attempt by the group to empirically explore the importance of the relationship between a classroom's physical environment and the perceptions of instructors and students who work and study in that classroom. After all, given that our physical surroundings have a profound influence on our behaviours, it makes sense for an institution devoted to higher learning, and especially one that is devoted to quality undergraduate teaching, to engage more closely with classroom space and to understand how the learning environment can be designed or modified to improve instruction and learning. The LEEWG sees itself as playing a collaborative and leadership role in developing relevant evidence-based criteria to inform classroom design at the University of Lethbridge.

This article focuses on one aspect of this project: an examination of instructor and student perceptions of the physical aspects of the learning environment in room L1050, and the effect, if any, that comprehensive changes to this classroom had on these perceptions. As such, we are especially interested in comparing perceptions of the physical environment of L1050 before and after changes to the room.

Recent research (Hill & Epps, 2010) certainly suggests that students are perceptive of changes to classroom environments, and may be more "satisfied" (p. 77) with courses taught in improved classrooms. Of course, while student satisfaction is an important consideration, what the group is also interested in is whether improvements to a classroom environment have an impact on student learning and, by extension, the quality of their academic outcomes. Put differently, as Lizzio, Wilson, and Simons (2002, p. 27) ask, do students "do well" or "not so well" regardless of the environment? It makes sense that a similar question could be asked of instructors: does the classroom environment influence the quality of instruction, or is the quality of instruction similar regardless of the room? Although we do not test these questions directly, the results reported below are suggestive of significant and tangible improvements to both the instructor teaching and student learning experiences as a result of the changes to the classroom design of L1050.

We should note that, early on in the project, L1050 was chosen as a "locus of convenience" in that (a) it is a space that could be physically reconfigured (to the extent that was required) relatively easily and inexpensively; (b) similar courses, in terms of content, level, and number of students were scheduled in this classroom for both fall and spring terms; and (c) in both terms a sufficient number of instructors teaching in the classroom were amenable to participating in this study. The classroom itself is a non-tiered rectangular 30' x 44' (9.1m x 13.3m) room that is designated to accommodate 60 students. The room contains movable tables and chairs, usually configured into rows oriented parallel to the length of the room (Figure 1).

Figure 1: *L1050 in Fall 2012*

Data Collection

The instructor and student samples upon which our findings are based were taken from courses scheduled to be taught in L1050 in the Fall 2012 and Spring 2013 terms. Prior to the beginning of each term, instructors teaching in L1050 were contacted to inquire if they would be interested in volunteering to participate in the study. Out of a total of fourteen different classes that were scheduled to be taught in the Fall 2012 and Spring 2013 terms, four instructors in each of the Fall and Spring terms agreed to participate in the study. Those who agreed were from a relatively diverse group, representing a diverse variety of courses from different faculties. After an instructor had volunteered to participate, students enrolled in her or his course were informed of the study and that their participation was completely voluntary. All instructors and students were guaranteed confidentiality, and each participant provided informed consent prior to their involvement in the study.

Information from instructors and students was gathered using a variety of data-collection methods, including an in-class survey, instructor interviews, focus groups for both instructors and students, and in-class observations, with the same methods being used in both the Fall 2012 and Spring 2013 terms. A total of 281 students responded to the in-class survey (153 and 128 in the Fall and Spring, respectively), representing a 79% response rate, and a total of 14 students participated in the focus groups across the two terms. Importantly, all of the data collected in the Spring followed substantial changes to the physical environment of the room (Figure 2), completed during the Reading Week break in February.

Figure 2: *L1050 in Spring 2013*

Classroom Modifications

The changes made to L1050 were primarily based upon comments from faculty and students, collected in Fall 2012, regarding aspects of the room that

they reported as either disadvantageous to instruction/learning or adequate but could be improved upon. Although most respondents were generally satisfied with the room, criticisms of the room tended to focus on the size and location of the whiteboard, inadequate sightlines and lighting, the relative inflexibility of the room configuration, the number of student desks in the room, the size and location of the instructor workstation, and the size and location of the digitally projected image. We additionally referenced innovative design recommendations for active learning spaces (Beichner, 2008; Brooks, 2011; Walker, Brooks, & Baepler, 2011), taken from a comprehensive literature review examining classroom space conducted by the group in Summer 2012. With this information in mind, the following changes were made to L1050:

- reversing the room orientation front-to-back
- reducing the seating in the room to accommodate a maximum of 40 students
- re-configuring the student seating into four rows of six trapezoidal tables accommodating ten seats per row; with a centre aisle in each row (three tables of five seats on either side)
- extending the continuous usable length of the whiteboard at the (new) front of class to 20'
- moving the whiteboard forward to just in front of the pillar on the (new) front wall
- replacing the existing digital projector and screen with two 80" LED high-definition display monitors located on either side of the whiteboard
- reducing the size of the instructor workstation and placing it just to one side of the centre aisle
- adding a SMART PodiumTM and document camera to the classroom technology suite
- painting each side wall blue

Findings

Comments from both instructors and students elicited during the interviews and focus groups were for the most part consistently positive about the room changes. In particular, both instructors and students responded very favourably to the reduced number of tables/chairs and the reconfiguration of the furniture on either side of a centre aisle – commenting on an improved sense of engagement with class activities and enhanced instructor-student and student-student communication. Additionally, in classes where collaborative or cooperative work was important, the ease of forming smaller work groups and then re-forming for whole-class instruction was noted. Instructors who had previously relied on adjacent "break-out" rooms outside of the classroom commented additionally on the efficiency of being able to have students work in groups (or "pods") within the classroom itself. Furniture reduction and reconfiguration was also noted to have improved student sightlines to both the instructor and presentation materials. Having a continuous length of easily visible whiteboard was also positively highlighted (the previous configuration of the room had two white boards, separated by a pillar). Instructors responded very favourably to the smaller workstation, and particularly commented on the added value of the SMART PodiumTM and document camera. Interestingly, the colour of the walls was cited as having a consequential favourable influence on the aesthetic of the room as well as positively impacting the effectiveness of the room lighting – eliciting comments that the room now seemed "warmer," "more intimate," "more stimulating," "more comfortable," and "less institutional"; while the lighting appeared to be "less harsh." Reversing the room orientation was noted by both instructors and students as reducing the disruption and distraction caused by students entering and exiting the class, and easing traffic flow into and out of the room. Replacement of the traditional projector and screen, however, received a mixed reaction. While some instructors and students commented on improved image clarity and viewability, others reported two screens to be more distracting. Students particularly commented on the difficulty arising

from viewing a monitor from one side of the room while the instructor was speaking from the centre or pointing to something on the other monitor.

The findings from the student survey data support many of the comments reported above, in that they too indicate an almost consistently positive response to the room changes. For example, in response to the statements, "The classroom in which I am taking this course is an effective space in which to hold this particular course" and "The classroom…facilitates student engagement in the learning process", Figures 3 and 4 clearly show a shift "upward" (i.e., away from "strongly disagree" and toward "strongly agree") when the pre- and post-room-modification results are compared. We should note that preliminary analyses examining differences by age, gender, major, and year of study between the Fall and Spring samples of students were non-significant, so we have no reason to believe that these changes across terms were the result of cohort effects. Clearly, then, these results are suggestive that the changes made to the L1050 enhanced student engagement and made the classroom a more effective learning space. Statistically significant ($p<0.001$) increases were also observed for questions asking students about how they generally felt about the room (from "hate it" to "love it"), whether they felt the room facilitated different learning activities, and whether the room was physically comfortable. Significant increases in reported perceptions regarding room configuration, sightlines, and the colour of the walls were also found. These general improvements to student perceptions are exactly what we'd expect if the modifications to L1050 enhanced it as a teaching/learning space.

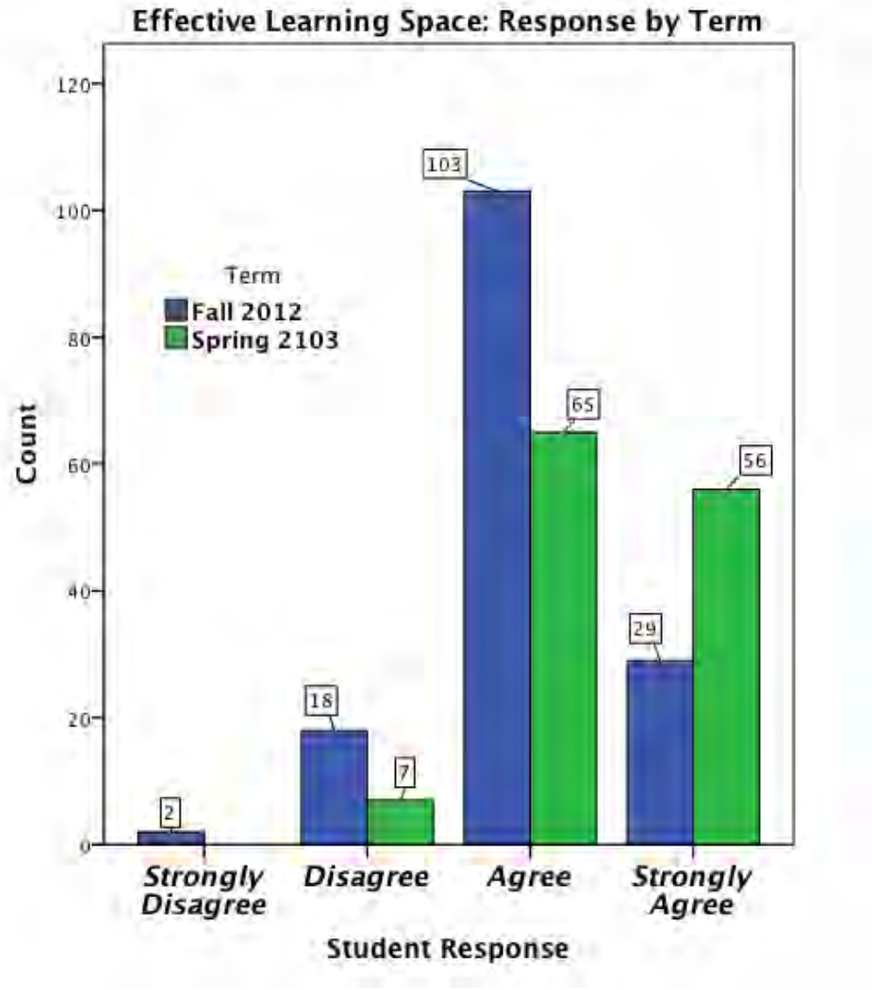

Figure 3: *Student Responses – Effective Learning Space*

Conclusion

What is obvious from the findings is that the initial results from this project indicate that the renovations have made a significant improvement to L1050 as a learning environment. Both the reported perceptions of instructors and students identified here as well as anecdotal feedback following the changes to the room suggest that a number of the changes have been well received and are perceived to favourably impact teaching and learning. Certainly, this

preliminary data positively and significantly supports the changes made to particular features of the classroom, including:

- the room and furniture reconfiguration
- the reduction in the number of student spaces in the room
- improvements to the whiteboard space
- painting the side walls

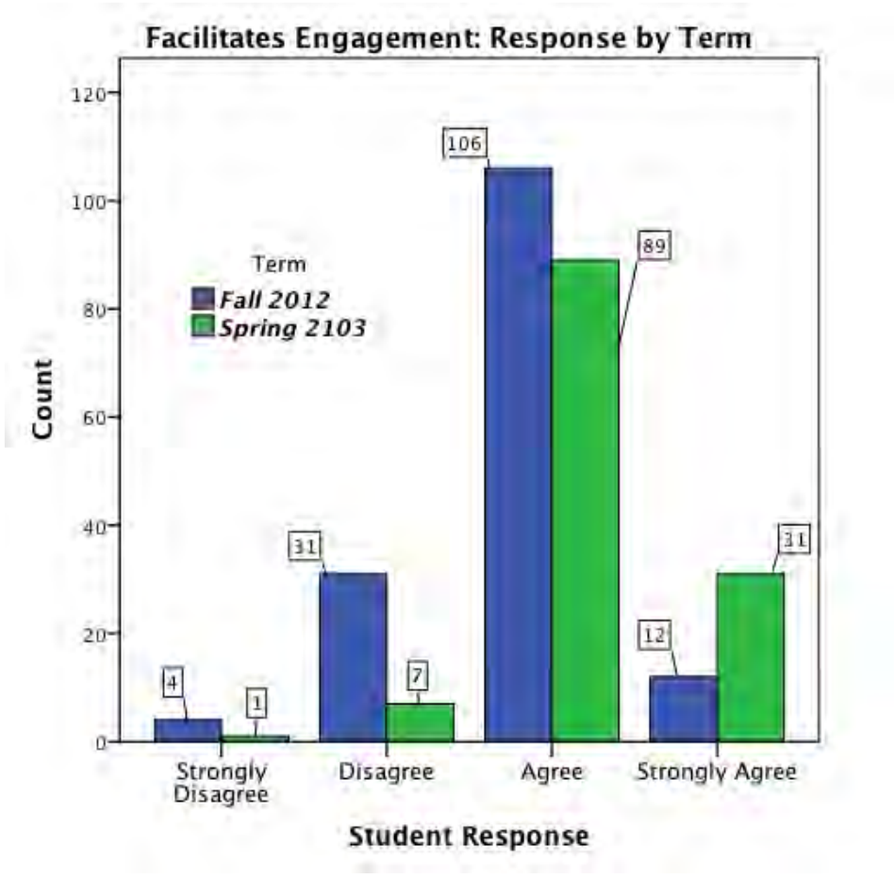

Figure 4: *Student Responses – Facilitates Engagement*

Changes to the room configuration and the reduction in the number of desks in the classroom were particularly noteworthy for the overwhelmingly positive reception they received. We were fortunate in that both in the Fall and Spring terms there were no more than 40 students enrolled in any course scheduled to be taught in L1050, allowing us to make this modification (the classroom originally held 60 students). Reducing the number of desks clearly increased the flexibility of the room, allowing the desks to be moved with ease when necessary, whereas the room when arranged with seating for 60 was simply too congested to allow this. The less tangible but general sentiment regarding the "feel" of the room, in terms of things such as instructor movement and a sense of "congestedness" among students, was also improved. We might conclude from this that while L1050, when arranged to hold 60 students, passes the necessary building codes regarding occupancy, this does not mean that it necessarily passes what arguably should be considered more important pedagogical considerations. Given this, we are hopeful that the room configuration stays at 40 in the future.

The addition of paint to the side walls appears to have some of the effects we had hoped for, in that most who commented felt that adding some colour to an otherwise entirely white room improved the room's ambiance. There was, however, an unanticipated effect in that, despite no modifications being done to the lighting, a number of students commented that the lighting in the room had improved, making the room brighter. Although considerations regarding what specifically is an appropriate room colour (or colour scheme) go beyond the scope of this preliminary study, our findings suggest that colour choices should not be relegated to a secondary consideration when designing a classroom. As well, it appears that numerous classrooms around campus could be improved in subtle ways with the relatively simple and inexpensive addition of paint.

Although the changes to L1050 were generally viewed quite favourably, not all of the changes necessarily were. As we noted earlier, the results were inconclusive regarding the replacement of the projector and screen with the two side-mounted LED displays. The fact that some students and instructors were receptive to the two displays, while others found the use of a second display to be distracting is important, as it speaks to the difficulty of doing classroom modifications. That is, while some instructors and students may perceive a particular change to a classroom positively, based on their personal teaching and learning styles, others may see it as detrimental. It may also be the case that a particular change to a room might enhance one aspect of the learning/teaching experience, but be detrimental in another way. For

example, in this particular case, while the use of two displays appears to have significantly improved sightlines in the room, it also appears that the two displays may lead to students feeling more distracted and less "connected" to what is being presented on the display. Of course, the two displays were incorporated into the updated classroom design of L1050 to allow for more whiteboard space at the front of the room. Again, this is an example where improvement to one aspect of the classroom may have potentially been detrimental to another.

The findings reported in the present article are, of course, only preliminary. We hope to further validate these findings, and explore more closely the changes made to the room's technology (e.g., the use of two LED displays) in the Fall 2013 term. As such, the project is ongoing, both in terms of our examination of L1050 but also more generally in terms of our examination of other learning spaces across campus. For example, we're concurrently in the process of examining, and hoping to improve, L1060 as a learning space.

As the university engages in planning for both the construction of new teaching spaces and the renovation of existing spaces as part of its ongoing Destination Project, the LEEWG sees the examination of classroom design as vital to this process. Given the preliminary findings from L1050, we are particularly interested in exploring classroom designs that accommodate a broad spectrum of instructional methods, from traditional to emerging delivery styles, and to promote designs that enhance teaching and "promote learning excellence" (Mitchell, White, & Pospisil, 2010, p. 15). In short, the group feels that classroom designs should be supportive of different teaching and learning styles, support individual as well as collaborative learning, be inclusive, be motivating, as well as be flexible as the University adapts to changing needs, both pedagogical and technological. Of course, such goals are diverse, and not necessarily easy to accomplish in any one room. The LEEWG, in collaboration with the Teaching Centre, is hopeful to take an active role to help ensure that these goals are, to the best extent possible, met at the University of Lethbridge.

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WHOSE LEARNING IS IT ANYWAY?

INCLUSION AND DEMOCRACY IN THE UNIVERSITY CLASSROOM

by Dr. Jennifer Mather

Motivation, whether it is intrinsic interest in the subject or extrinsic drive for success by measures such as grades, is a powerful force in accomplishment and success (Kunda, 1999). It is therefore vital to give students the drive to succeed in the university setting (Davis, 1993). This can be accomplished by a number of teaching approaches, including making the work connected to the "real world," providing choices, balancing the challenges of the work, using peers as models for success, and creating a sense of belonging in the classroom. The standard lecture method of university teaching includes few of these motivators. In addition, as Gardner (1983) discusses in the context of multiple intelligences, it focuses on only two cognitive skills, linguistic and logical-mathematical. This ignores students who utilize others of the Kolb (1976) learning styles (Mather & Champagne, 2008). In addition, rote learning is at a low level and the information acquired is soon forgotten. In contrast, student assignments involve them in "real-world" tasks and give them experience that ultimately translates to the employability skills that are valued in the workplaces to which they are destined (Conference Board of Canada, nd). But these assignments are difficult; how can students be motivated to accomplish them? One way is to give them choices and a vote in the processes, to bring some democracy to the classroom.

We can democratize the classroom by tapping into extrinsic motivation and involving students in the assignment of the all-important grades. I have brought a course outline to my fourth-year (size limit 20) course for years without giving the value of each of the four assignments. Instead, I asked the students how much they thought each aspect of the course should be worth in the first class meeting (it has to be done in that class to be legal, and at the University of Lethbridge you have to issue a whole new Course Outline the next class). Discussion ensued, and we came to an agreement on allocation. One year, the students had a fierce debate and came to no agreement. They asked me if I could allow them to make individualized allocations. After consultation with the department chair, I agreed and each filled out and signed a short "contract," with minima and maxima for each assignment. Three years later, as I was describing this model, one of the classes said, "No, we should all have the same" and we went back to the old model. The next year, however, we returned to individualized contracts. I have since spread this discussion on grade allocation to my third-year classes of 30-40. After some early startle, they have an intelligent and informed discussion about what the grade allocation should be, in the process beginning to build a sense of belonging (Freeman, Anderman, & Jensen, 2007).

Another way in which students can be participants in their grades is for them to help set the value of different components in assignments. For instance, they know in general what an essay is, but with discussion they can see the division into content (information conveyed) and process (demonstrated ability to convey it). They can understand and agree with how the different topic areas that have been specified in the course outline can be valued. They acquiesce with some hesitancy when I specify that some marks must be allocated to process; I point out that if they are ever so knowledgeable yet cannot properly convey that knowledge to me, then it's no good (and I sometimes point out that in the process they are gaining employability skills). I drag them out to some marks being allocated to APA format; it's how we are required to convey our information and they might as well learn it. A similar discussion can take place about how oral presentations and posters are evaluated, as well as research projects (where I insist on some marks for the proposal) and even an annotated bibliography. Any project can be broken down into components and this breakdown allows them not only to see the worth of each piece (for the extrinsically motivated) but to get an idea of how to tackle it.

A third way that students can participate in the grading process of group work is to have an end-of-semester evaluation of each member's contribution. Certainly observing and benefiting from the skills of others is valuable (Davis, 1993), but many good students dislike group work because they feel that contributions will be different. They may end up "carrying" less capable or less energetic students, and they resent it. A course-end evaluation of each member's contribution can correct that perception, and if all students evaluate

the participation of every group member, including themselves, minor likes and dislikes even out. This percentage evaluation changes the grade assigned to each group member. If there is a large component of group work in the class, a relatively small percentage of deviation can make a huge difference in the student's final grade. I have set limits—not below 80% or above 120%, and I remind them throughout the semester that for this system to work, they must be honest with themselves. Mostly, they are.

The ultimate democratization of grades would be for students to do self-evaluation and receive the grades they recommend. I was told that students would grade themselves lower than I would, and yet I found they graded themselves higher in that fourth-year course. I kept on with asking for a "recommended grade" for a while, until one year a student told me that she had been advised to ask for a grade higher than she thought she deserved, as I graded them one letter grade lower than they asked for. But what I haven't stopped asking for is an informal evaluation of their performance in the course. I actually point out it's in their best interest to do this, as they may have made contributions or had discoveries that I wasn't aware of. I do take this self-evaluation into consideration, and mostly the students are honest about it, too.

The other major aspect of democracy in the classroom is participation. Instead of a passive vessel for information, students can be asked their opinions and give information to their peers. This can be as simple, and useful in large classes, as clicker responses. Posing a collective question, the teacher can extract multiple answers. Of course, this doesn't work if the only purpose is to find out whether students understood what the teacher was teaching them, but it's easy to extract opinions, discuss them, and get a snapshot of what the collective understands and believes. A similar low-tech exercise is "teach-pair-share," when the teacher stops and has students gather, usually in pairs, discuss for about five minutes, and report what they think of the concept. Both techniques work because, again, they bring the students into the discussion and give them the sense of belonging to a group.

Students don't just need to be part of the discussion, they can teach each other as well. Oral presentations, whether they are reports on an interview or activities outside of class or the fruits of library research, can be dually valuable. First, they can inform the class of something the professor might not have covered, or might not have viewed in the same way or taken in the same direction. This can be particularly useful if the students are asked to do a short paper responding to the views given in one of the presentations. Then they are forced to evaluate at least one of the ideas presented by their peers. But this type of oral presentation serves a second purpose, to train them or at least begin to train them in oral presentation, one of the employability skills that they will likely use all through their adult years. And in the process there is a shift in ownership--it's not "my" classroom as much as "ours."

Shaping the learning to the students' desires and directions can be done much more by the process of inquiry learning, fostered particularly by McMaster University in Hamilton. In that process, students decide what they want to learn, and then go about learning it. I have used a slight modification of this model, where students (in groups, for a class size of 20-50) take on a chapter of the text per week. They generate a question and justify why it is important on Tuesday, send it to the class e-mail and then choose someone else's question and answer it beginning on Thursday. There is a subtle rivalry for being the group whose questions are chosen, but no marks for this. And along the way, something disconcerting happens to the teacher (Mather, 2007). You become not the centre but an advisor, the source of advice and assistance to students working on their own problems and challenges.

This is probably as close as the modern university classroom can come to the tutorial system in classic British universities, where the tutor met with individual students, gave them assignments and assessed their progress. Interestingly enough, we still have Independent Study, Honours, and Applied Study courses that offer the students the same advantage and freedom. I still remember talking to an Applied Study student about the two papers that he would write for me, and asking him what he wanted to write about. "What?" he said. "You mean I can decide to write about something I am interested in,

care for, and want to use as a foundation for my future studies?" Yes, indeed. One caveat to this approach is the experience of students who join a busy lab and are assigned a piece of the professor's work to carry out or, worse, are assigned to assist a graduate student in the work s/he is doing. There are a lot of useful lessons to be learned from the experience, but it is not independent work.

Is this kind of teaching democracy or is it chaos? In the end the professor has the final say--the grades for the assignments, papers, and presentations. Of course any sane professor is open to discussion, challenge, and evaluation of what students did in these activities. It's that or face a grade appeal, though students probably appeal in thoughtful democratic classrooms much less that idiosyncratic evaluation of "what you should have learned" in an exam. And unconventional teaching does mean you have to face up to not knowing precisely or in detail "what the students have learned." But the conventional classroom teacher with the conventional exams doesn't really know, either. Sometimes teaching seems like running a roller over a grassy area, the blades bend as you roll but spring up as they were after you have passed. Still, this kind of inclusive teaching gives students something we say they should get from a university education--ideas of who they are, what they can do, and where they belong in the universe of educated people. Plutarch said (at greater length) that teaching is not about filling a vessel, it's about lighting a fire, and a democratic approach to the university classroom offers more chance of doing this than lectures and exams.

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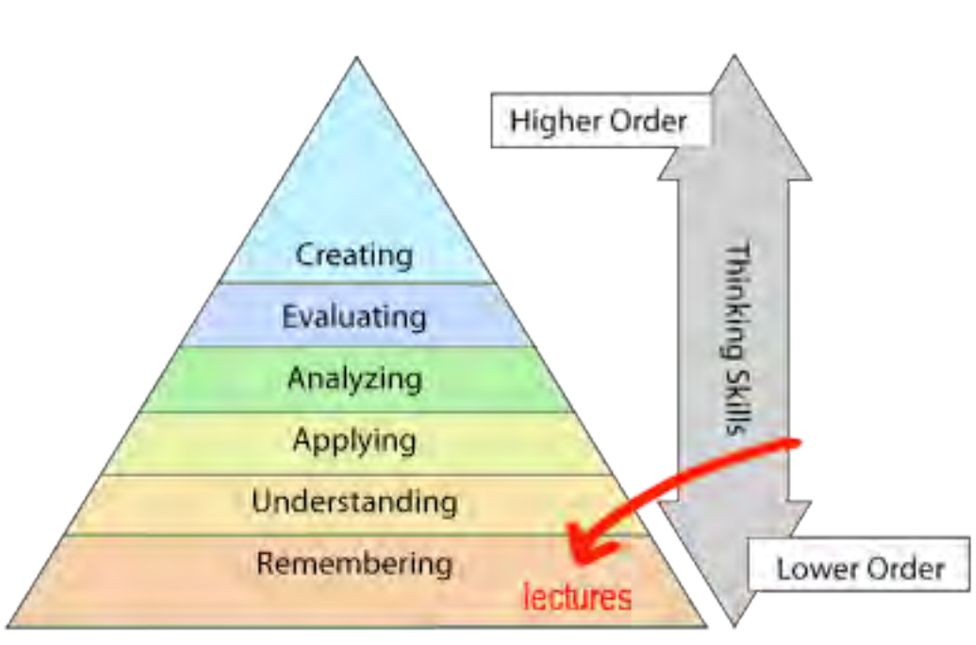
FLIPPING THE CLASSROOM

by Brad Reamsbottom

A question that is often discussed by the Teaching Centre is whether or not lectures are effective, or are lectures effective use of class time. The answer to that question of course will vary according to what you want your students to learn, as well as how comfortable you feel lecturing to your students.

If we look at Bloom's Taxonomy and where on this scale lecturing fits, we can see that lecturing is considered to produce lower order thinking skills. Lecturing often is looked at as having a lower retention rate for what is learned, while having the students teach about a particular topic will have a higher retention rate for learning. This does not mean that lecturing is completely ineffective, it just means that it is only one way of disseminating information for learning. In cases where foundational knowledge must be disseminated to the students lecturing is often an effective tool.



However, there are some different ways we can incorporate the lecture to make the best use of face to face time with the students. If lecturing is a one way communication tool, then having students study the lecture material on their own time might free up more class time. In its place you could incorporate more discussion, group projects and other activities. All of these activities generally have a higher percentage of learning retention than lecture. Placing the lecture online for students to access as part of their homework is one method of "flipping the classroom." It is considered flipping the classroom because you are moving the lecture into the realm of homework rather than a standard in-class activity.

There are a few things to consider if you want to flip your classroom by putting lectures online. First consider how you wish the students to use their time. What did you normally have them do outside of class time? Keep in mind that if you normally lecture for 30 minutes of a 50 minute class, you are now adding 30 minutes of homework to your students activities outside of class. You should structure asynchronous homework and activities accordingly. Do not ask your students to add 30 minutes of lecture time to their evenings if you don't plan on lightening up on reading or other activities. Also keep in mind the length of lectures you are posting. If you find you keep your lectures to 30 minutes in order to keep your students attention, then don't try and extend the lectures when you move to an online format. It would probably be good practice to even shorten the lectures if at all possible. Another strategy could be to chunk your lecture into 2 or 3 pieces, so it is available to your students in bite size chunks. Remember the goal of flipping the classroom is to take the lecture out of the class, not double the workload of the student.

Another aspect to consider is what you will do in place of a lecture when your class meets face to face. Will you have students work in groups, or will you increase the amount of class discussion? Whatever you choose, make sure you are prepared for your class once you make the change. If you plan on increasing your discussion time in class, then have a plan. Make the discussion relevant to the lectures you had students watch online. Ask them questions pertinent to the videos. Do not assume that because students often have questions after class, that they will be eager to discuss those questions when you incorporate more discussion time. Consider asking students to submit their questions regarding the online lectures via email or an online discussion forum. This has a couple of benefits. First, you can use student comments to

feed the discussion during the next face to face meeting. Second, it will be an incentive to actually watch the online lecture. Third, having students submit comments is also a great way for them to reflect on the material they just watched.

Be aware of your time, and how much time it takes to flip a classroom. There is no way around the time and effort required to get your lectures up online. Get a good grasp as to how much time building these videos takes. Do you have the skills to build these videos? Do you need help producing the videos? Don't try to change everything if you don't have the time to prepare for the change.

If time is a constraint, consider only flipping some of your lectures rather than all of them. This will allow you to try out the flipped classroom for specific lectures and gather formative feedback from your students as to how they liked the idea of a flipped class.

As with any change to the how a course runs, it is essential that the students are informed. We need to be cognizant of the fact that many courses utilize the in-class lecture format. Student are familiar with this format. If you are planning on making significant changes to the course, be sure to inform your students and clarify any questions they may have about what is expected of them.

Whether you are lecturing face to face or if you are putting your lectures online, be sure to have a plan. Make sure you know why you are flipping your classroom. Have a justified reason to make this significant change. As with any change in your course, the goal should be to improve teaching effectiveness and student learning.

If you are planning on changing some aspect of your course, such as the move to online lectures, contact the Teaching Centre to see if they can assist you. teachingcentre@uleth.ca

CONFERENCE OPPORTUNITIES

ISSOTL13: "Critical Transitions in Teaching and Learning"

October 2-5, 2013

http://issotl13.com/

Raleigh, North Carolina, United States

Innovative Learning-Scapes: e-Scapes, play-Scapes & more

May 31 to June 02, 2014

To examine the impacts that social and mobile media and networks are having on learning environments in higher education.

https://www.hetl.org/events/2014-anchorage-conference/

Proposal Deadline: August 16, 2013

CIDER 6th Annual Conference on Higher Education Pedagogy

February 5-7, 2014

The 6th Annual Conference on Higher Education Pedagogy is focused on higher education teaching excellence and the scholarship of teaching and learning. The conference showcases the best pedagogical practice and research in higher education today. Sessions address disciplinary and interdisciplinary instructional strategies, outcomes, and research. Ultimately, the conference is an opportunity to demonstrate effective instructional practice and disseminate the latest research aimed at improving the quality of higher education.

http://www.cider.vt.edu/conference/

Proposals Due: Monday, September 16, 2013

Teaching Professor Conference

May 30 – June 1, 2014

Boston, MA

http://www.teachingprofessor.com/conferences/conference

The Teaching Professor Technology Conference

October 4 – 6, 2013

Atlanta, Georgia

http://www.teachingprofessor.com/conferences/technology-conference-2013

PAPERLESS PAPERS

HOW TO GRADE ON AN IPAD

by Dr. Harold Jansen

My iPad has become pretty integral to doing my job. I put meeting agendas on it, use it to read articles, dash off quick e-mails to students, and keep up with what's happening on campus, in my discipline, and around the world. This past year, though, I figured out how to use it for one of the most time-consuming parts of my job: grading papers and assignments. It took me a while to perfect the work flow, but here are the steps I use.

1. Have your students submit their papers or assignments electronically. I use Moodle for this, since it provides a handy time-and-date stamp for every paper. I then use the "download files as a zip" option to download them all to my computer quickly and conveniently. I then unzip the file and have a folder with all of my students' papers. If you don't use Moodle, you will likely have to have your students e-mail papers to you.

2. Convert the papers to PDF. I prefer to grade PDFs because I can annotate them the way I like to grade. Mostly I want to be able to circle, draw arrows, cross things out, etcetera, and PDF annotations allow more flexibility to do that than the review function in Word, for example. The problem is that, even if you ask your students to submit their papers as PDFs, many cannot or will not do it. Most students submit their papers in Word format, and Word can convert over to PDF, but you have to load each file manually and save it as a PDF. That's fine for a small class, but for a large class I use a handy Automator script that automates the loading of Word files and their conversion into PDFs. This only works for OS X, though. If you are a Windows user, there are several programs out there that can handle batch conversions.

3. Load the PDFs into Dropbox. If you don't already have a Dropbox account (dropbox.com) you should get one – it is cloud file storage that automatically synchronizes your files between computers and devices. The basic account is free; if you need additional storage beyond the basics, it will cost you. I create a folder called "Papers to Grade" in my Dropbox.

4. Run the PDF reader on your iPad. There are several of these. I use PDF Expert because it has the ability to sync with Dropbox. I use PDF Expert to access the "Papers to Grade" folder in Dropbox. I have it set to automatically sync, so that any changes I make to the papers on my iPad will automatically sync up with my computer.

5. Read and grade the papers. I use a stylus to mark up my students' papers, because I like to be able to draw arrows and circle things. I even use the stylus to scrawl short comments as needed. If the comment is larger, I can use the text tool. You can grade in as many different colours as you want, and adjust the pen width and style, an added advantage of paperless grading. At the end of the paper, I typically write a more lengthy set of comments using the text tool. I have even created a grading rubric table, converted it to an image using a screen capture, and then used the stamp tool to embed that rubric at the end of the paper.

6. Return the papers to the students. If you've done it with the same set of tools I've used, all your graded papers should have synched from your iPad to the "Papers to Grade" folder on your computer, thanks to the magic of Dropbox. You can e-mail them back to the students or use the tool in Moodle that lets you upload feedback (which is what I do).

After all this, you might wonder why anyone would bother going to all this trouble. Besides the obvious environmental and economic advantages of this system, I like it because I don't have to manage a lot of paper or keep track of when things were submitted. In the course of my career, I've lost a paper or two. This does not happen with paperless grading. Even better, though, is that I have my "stack" of papers wherever I go. I've graded while waiting in my car for an oil change, while taking my kids to the dentist, and while waiting for them to finish piano lessons. If I have my iPad with me, I can grade. When things get busy at the end of the term, every minute counts, and paperless papers help me use that precious time as efficiently as possible.

Green Chair Interview

with

Nicholas Hanson

Recently the Teaching Centre interviewed several of the instructors from the University of Lethbridge teaching community. These interviews have been named the Green Chair Interviews. They are one-on-one question-and-answer sessions with some of the University's great instructors. Each interview provides insights into the instructor's teaching philosophy and teaching strategies.

Here are two questions and answers from our interview with Nicholas Hanson from the Faculty of Fine Arts (Drama).

Alyssa: What is your philosophy of teaching?

Nick: I think that my teaching philosophy centers around creating ways to engage with my students. As actively as possible with as much participation as possible, and once that's achieved, trying to generate enthusiasm so that students can then take that engagement in that subject and move into the community so that they can share their talents and times with the broader community.

Alyssa: What have you done in class – things that have worked, maybe things that have not worked?

Nick: In lecture classes, what's been particularly effective is trying to create conversational moments, even if it's just taking one minute to ask people in a large lecture hall to ask and answer questions with the person next to them. That can create a lot of active engagement and I think that those sorts of moments break up the sometimes monotonous structure of a lecture and they also create a space for students to share their perspectives on a topic.

Alyssa: Thank you for joining us, Nicholas. It was great having you here for our Green Chair Interview.

Nick: Thanks, my pleasure!

See the full interview and more on the Teaching Centre video page at: http://www.uleth.ca/teachingcentre/video

Can't wait for our website, watch the video right now.

TEXTING, IN A NEW, Old-Fashioned WAY

by Dr. Hillary Rodrigues

I will be sixty when this article sees the light of day, and although I feel young at heart, my daughters and colleagues assure me that that feeling does not translate to my appearance. So it should not surprise anyone if I cherish some old-fashioned ideas, and I most certainly do. I have a Facebook profile but almost never use the site, because I like privacy. I do not use Twitter or a host of other communication methods, because I am somewhat quiet by temperament, and do not feel the need to share my thoughts constantly. Now that I am confessing, I must admit that I do not like the telephone much, either, because I often find it intrusive. I am fond of face-to-face encounters when discussing professional matters of consequence, but prefer if these too are kept to a minimum. Honestly, my favoured method of professional communication, most of the time, is through e-mail. Sadly, this is now also my most common mode of personal written communication, and I regret my reluctance to take pen to paper to scrawl out my thoughts and feelings to my loved ones in my distinctive and progressively more illegible handwriting. Others also seem to prefer e-mail, because it has been a long time since I received a handwritten letter in an envelope sealed with a lipstick kiss – although that too may have something to do with my age.

I wouldn't call myself a Luddite, because I do enjoy and embrace technological advances that I am capable of using to my advantage. I own a smartphone, and I text. Text messaging, of course, is what the word "texting" means to most of us today, and it seems to be, by far, the most common way in which my children distance-communicate with their peers. Actually, I too use it more frequently than the telephone to communicate with my children and my partner, although the issue of communication through texting can instantaneously elicit a (gentle?) rant from her about its many shortcomings. We don't really disagree on this, although I do like playing devil's advocate, suggesting that texting has certain merits, just as e-mail does over the handwritten letter. Mind you, I definitely do not always text the way younger generations do, as a rapid-fire staccato of near-immediate back-and-forth messaging. I mostly use it as a sort of Twitterish e-mail, that is, for short communiqués, and responses to messages that I don't allow to sit unanswered for too long. In many ways, for me a cardinal value of texting is that it allows me to communicate with my daughters in a manner in which they are accustomed. This is a key point in this article, which is not at all about texting with one's smartphone, but about the writing of textbooks – that old-fashioned informational aid – in new styles and media, to better serve the changing needs and learning styles of our students.

How useful are textbooks, anyway? As a student, I used textbooks through much of my education, particularly in elementary and high school, and as an undergraduate, and have found them to be of varying usefulness. Some were well written, helpful aids, while others were utterly without value. For instance, in my high school I happened to be in the advanced Canadian history class along with about 20 other students. The textbook that our instructor had chosen (or was assigned) was undoubtedly wonderful, but its prose was clearly pitched at those far more erudite than me with my Grade 10 reading abilities. Moreover, it assumed a sensibility to social, political, and historical processes that far exceeded our understanding, and analyzed Canada's history from that perspective. Not far into the year we all complained about the text (it turns out that none of us was able to read and understand at that level), but it was too late to get a different book for the course. Our anxiety was heightened because our instructor, while extremely knowledgeable, was inexperienced at teaching, and assumed we would fill in the many gaps in our information base through our readings. While my classmates limped along with the advanced text with which we were saddled, I accepted the humiliation of "downgrading" on bragging rights. With my own pocket money, I bought the textbook that was being used by the majority of the other history teachers and my friends in the many "lower level" history classes in the school and studied from it as well. That book was enormously helpful. The result: greater success than my advanced cohort in the provincial exams (which, incidentally, counted for 100% of the course grade). I thought to myself, "If ever you teach, choose texts that your students can actually read and understand." I also learned to appreciate the value of a well-written comprehensive informational aid, a

trustworthy resource to which one could turn to find, where collated in a single source were reliable answers to most of the pertinent questions in a particular area of study.

I still have on my bookshelves some texts from my undergraduate university courses. An introductory text on quantum mechanics comes to mind. If the truth be told I certainly did not read it from cover to cover, but still consider it a useful reference. I painfully admit that during my undergraduate years I bought several science textbooks (at great expense) that were designated as required for various courses, but which I hardly used at all. Mind you, I attended classes quite regularly and took good notes. My professors generally discussed the material that I was expected to understand, certainly as well as if not mostly better than the text, which generally served as a sort of a fallback in case one needed another source of information and explanation. It did disturb me that we were sometimes directed to buy expensive books that we did not really need at all to succeed in the course that we were taking. I still wince when I read (in other professors' teaching evaluations, of course, never in mine!) felicitously worded student comments, such as "Didn't need to use the * $@%%# textbook!" Had I continued to pursue a career in the sciences, I suppose some of those texts might have continued to be useful references, although the shelf life of most textbooks in science and technology is very short. How useful are your old manuals on computer programming? When texts cost between $50-150 a pop, it is crucial that we think long and hard before making them course requirements rather than recommendations.

Once I began to teach, my attitude to textbooks shifted accordingly. Some of my early teaching experiences were in schools where the books were selected and assigned by school boards. The texts were either student friendly or were flawed aids. Teaching thus included the added factor of understanding how to use a friendly text advantageously, or overcoming a flawed one's shortcomings. For instance, poorly edited mathematics texts might contain simple mechanical errors, such as a misplaced decimal, a dropped negative sign, or an incorrect numerical answer to a problem. In such cases, it is evident how both students and teachers need to accommodate themselves, with some duress, to the realities of the textbook. Of course, we need to accommodate and adapt in order to effectively use any textbook, no matter how well written it is.

Issues concerning textbooks were amplified when I began to teach at the post-secondary level because I was finally empowered to make my own decisions concerning them. No longer did I have to adapt to the books that were thrust upon me by well-meaning school boards. I could choose my own poisons. Having taught in alternate education milieux, and having had the opportunity to reflect on issues of pedagogy, the post-secondary setting allowed (and still allows) me not only the discretion to choose my own textbooks, but to choose none at all. Unfortunately, as Spiderman's Uncle Ben had noted, and Voltaire before him, with greater power comes greater responsibility, and the dilemma of texting or not-texting in the old-fashioned way plagued me as it still troubles most university instructors. The pros and cons of using textbooks at all, and the contexts in which they might work best, is a topic worth exploring – but not here, now. Suffice to say that if texts are used, professors should take some time to explain to their students the role each text could play in their learning experience, and how to get the most out of it. In contrast to high-school models of instruction, most professors do not teach "from the text," since it serves as a supplement to our lectures and an additional informational resource for students. That is why students sometime "never need the &%$#@ book" to pass the course. If the book is a new and untried selection, it makes good sense for the instructor to get some feedback on how students are relating to it, and take appropriate actions to overcome any of the book's limitations. [i]

I found myself faced with yet another challenge in my teaching career when the textbooks that I had selected proved to come up short. Although educators seem to routinely produce textbooks for elementary and secondary school courses, I found a dearth of adequate textbooks produced for university-level courses of the type that I was teaching. For instance, while undergraduate introductory courses in world religions are not uncommon, the vast majority of available textbooks were written for courses that are taught over two semesters rather than one. Every couple of years, publisher representatives

would leave the newest editions of the same handful of existing books for us to thumb through in the hopes that we might select one for our world religions course. These newest editions would contain a few more glossy photographs, some colour-highlighted text boxes, a few study questions, and so on, in order to appear sufficiently different from the previous edition. This is still the norm. To me, the listed prices for these books seemed excessive (they still are), and the actual costs for students through the university bookstore were typically even higher than that (they still are). Most unfortunately, these books did not ideally serve the needs of my students (they still don't). If anything, they provided too much information than could be taught or absorbed in a semester-long course. Of course, I would have liked my students to have been interested in everything, and to read the relevant chapters in these books in their entirety, but my students were often ill-equipped to distill just what they were supposed to absorb and remember for test purposes. The textbooks delivered equal doses of information and anxiety. Within a few years, my colleagues and I had tried virtually all the major freshman texts on the market, and found ourselves disappointed with their shortcomings. The main problem was that what was needed was a proper fit, which, like a comfortable pair of shoes, needed to be "just right."

> *"Like frying pans and scissors, tried and true textual tools continue to be effective."*

It wasn't long before our frustration and need reached a tipping point, and one of my colleagues and I decided to write a book of our own, specifically tailored to the needs of students in single semester world religions courses such as ours. While we surmised there might be other professors who would benefit from something similar to what we envisioned, our primary motivation was to put together a learning instrument that would be of genuine aid to our students. Realistically, we hoped it would at least be of greater benefit to and induce less grief in our students than the existing offerings. The outcome of that project was a text on world religions, which is about to be contracted for a second edition (after about eight years). Although old-fashioned – in the sense that it was still a textbook, with pages and print – it was new because it broke with tradition in many respects. It did so, in part, by making use of the technologies then available to us. Rather than construct a pricey, glossy, colorfully illustrated text, we produced a relatively inexpensive black and white textbook devoid of photographs. But while the most expensive introductory texts contain a hundred or so color photographs, our text contained an accompanying CD-ROM (remember that digital storage medium?) that held over 400 color photographs. It contained sound files, and computer software for reviewing material and self-testing. There was nothing comparable in the field like this book. It is still being used, although it is in need of an overhaul. Several iterations of the work were field tested on our students before the text reached its final form. Needless to say, producing such pedagogic work is extremely time-consuming, and outside of education faculties mostly not given the recognition it deserves. Writing textbooks falls betwixt and between the typically acknowledged categories of research and teaching. Perhaps this is another reason why university-level textbooks that are suitably varied to accommodate diverse courses and teaching styles are in short supply. Few professors want to take the time to write them. And despite myths that circulate to the contrary, writing university textbooks does not garner princely royalty rewards for the authors. If a book does meet with success through wide course adoptions, the lion's share of the profits go to the publishers. Writing university textbooks for profit can be something of a fool's errand. It should primarily be undertaken as an act of service to students and the discipline.

To return to my narrative, at about the same time as I was co-writing the world religions text, over dinner with some colleagues at a scholarly conference I was probably griping about the absence of a suitable comprehensive introductory textbook on Hinduism for a sophomore-level course. Among my dinner companions was a publisher who challenged me to pitch a vision for a volume that I would write if given the opportunity. I did so successfully, but discovered that the book I would produce, should I choose to accept the contract, would be a digital one – an e-book! These publishers were the editors of one of the

first religious studies journals to be published exclusively digitally, a medium that was then (back in 1994) still viewed with enough suspicion to cast a shadow upon the content of material disseminated that way. Most of us implicitly, and quite absurdly, held the notion that if ideas were not transmitted and preserved in print, they were somehow of lesser quality. I do know how in certain religious circles, written scriptures, such as the Hindu Vedas, are sometimes viewed with greater suspicion and hold less sanctity than versions that are memorized and transmitted orally. Perhaps Gutenberg's printed Bibles were also initially viewed with some disdain in comparison to hand transcribed, illuminated editions.[1]

[1] A century later, in an alarming reversal, pages from handwritten, illustrated texts were sometimes being used as dust-covers for printed versions.

I must admit that the prospect of producing an e-book disturbed me. At that point I was less concerned with the quality of its content, a challenge I would eventually have to confront when actually writing it! But who would read it, I wondered? How would my students relate to the prospect of reading a book on their computer screens? This was 2004 and e-readers did not exist. It was not long before ruminating on the varied possibilities and potential of the electronic medium overcame my resistance to the drawbacks. I imagined the book having hundreds of digital colour images, and web links, easy upgrades and modifications, and a low price point. In truth, while I am proud of the Hinduism e-book, it lives up to only a fraction of its envisioned potential. In great measure this shortcoming has more to do with the technical limitations and constraints facing the publishers than the potential of the digital medium. For instance, they thought that a file size of six megabytes was about as large as such a book should be in order to facilitate downloading speeds and computer capabilities. How silly that seems in retrospect, when we now think of data in terms of gigabytes, with terabytes on the horizon! In the eight years since its debut, students are far more comfortable with purchasing a digital book through a website, and reading one on a computer screen. From the 70% who said they preferred a proper printed book eight years ago, now only about 10-15% voice that preference in the informal surveys I routinely conduct. Almost all students like the search features, the portability, the capacity to expand photographs, the web links embedded into the text, and a host of other positives found in the e-book. [ii]

Besides taking the plunge into the e-book medium relatively early, my efforts to reinvigorate the textbook format also extended to some degree to style and content. Scattered through the text, I inserted about half a dozen short narrative segments that run for a page or two, and begin with the phrase, "Imagine, if you will, this scenario." I then proceeded to recount a story that invites the student reader to enter into a scene drawn from my experience. For instance, "You have been horseback riding in the countryside of the state of Rajasthan and return late to your lodge on the outskirts of the city of Udaipur.... " Despite the innocuous nature of such narrative interludes, they actually dramatically deviate from most traditional textbook formats. In the old-fashioned textbook, there is rarely any indication of the personality of the author, much less the inclusion of semi-personal narratives whose fictive status is ambiguous at best. Postmodern sensibilities that we are each situated and bounded by our culture and framework, as well as literary tropes within certain genres of Hindu literature that include the author within the poem or narrative, played parts in my decision to experiment with such an innovation. I wanted students to get a peek behind the curtain and realize that textbooks are constructed by real persons, and all that that may entail. Moreover, I wanted them to identify imaginatively with the scholar-researcher. My students seemed to like those features, but would others find them appealing, I wondered? Shortly after the e-book was released, I was fortunate enough to have the manuscript picked up and published in the old-fashioned printed form. Sales and reviews have been uniformly positive, alleviating my concerns about the quality of the content, and both digital and printed versions are now contracted for second editions. In anonymous reviews, almost all of the professors who used the text commented on how much their students enjoyed those narrative components, and the new editions will definitely contain a few more.

The successes in these efforts fuelled my interest in other projects to revamp the old-fashioned textbook. I currently edit an innovative series of books in which scholars contribute pieces written specifically for novice undergraduates. It is quite a challenge. Their articles need to deviate in several ways from the traditional academic articles that they are accustomed to constructing. Each chapter should begin with a richly descriptive first-person narrative of some feature of the researchers' experiences derived from memory, notes, and so on, as they actually engaged in their study of a particular religious phenomenon. What, for example, did they see, smell, hear, and think when seeing someone enter into a trance to perform a spiritual healing? The intent is first to motivate students to read the text, thereby drawing them into the story in such a manner that they identify with the scholar-researcher. This person is not some remote authority, but a figure much like themselves, who is engaged in the process of experiencing something unusual and partially unknown. Only then do the articles proceed to explication, demonstrating how a deeper understanding of experience may derive from the application of methods mastered through years of formal training. Early reviews indicate that these pedagogic materials are being recognized as valuable and effective learning aids for student and specialist.

I am not by any means suggesting that textbooks are optimal teaching aids in all types of courses and at all levels of post-secondary education. I do know that I found my instructional introductory textbook in Sanskrit language and grammar indispensable when I first undertook undergraduate studies in that language. In many other such contexts textbooks work, and work well. They are traditional tools that have been with us for centuries, and although old-fashioned, should not simply be abandoned for that reason alone. Like frying pans and scissors, tried and true textual tools continue to be effective. Nevertheless, there are good reasons to try to improve upon old favourites, to make them resonate with our students' current learning styles and skills. For instance, my colleagues and I see enormous potential in the construction of engaging interactive texts through new software technologies, and would like to experiment in that direction. We sense the possibility of surpassing the limitations we encountered with our world religion text's CD-ROM, or in the somewhat attenuated incarnation of the Hinduism e-book. With the assistance of the Teaching Centre and Information Technology at the University of Lethbridge, I have also created a website that is something like a virtual textbook. It consists of encyclopedia-styled articles on aspects of the Hindu tradition written entirely by students. By seeing what their classmates in previous years have been able to produce, students are inspired to construct their own researched pieces and contribute to this virtual text, which is a work in continuous process.

Just where the world of information presentation and access will go in the years ahead is difficult to predict with certainty. Micro-tutorial YouTube lectures and massive open online courses (MOOCs) are examples of new options that provide students with a variety of alternate methods of accessing information and acquiring learning. In some of these cases, the video-lecture functions as text, with equally questionable efficacy. The textbook too is not immune to the changes that the future might bring. However, for as long as it is still regarded as a worthwhile instrument in an educator's toolkit, it is essential to understand a textbook's value and purpose, and how best to utilize it. Moreover, it makes good sense to keep innovating and refining old-fashioned items, until, like matchboxes and pencils, our indispensable need for them disappears entirely.

[i] On this topic, see: Berry, T., Cook, L., Hill, N., & Stevens, K. (2011). An Exploratory Analysis of Textbook Usage and Study Habits: Misperceptions and Barriers to Success. College Teaching, 59(1), 31-39.

[ii] Some recent studies of student reactions to e-texts are found in: Stone, R., & Baker-Eveleth, L. (2013). Students' intentions to purchase electronic textbooks. Journal of Computing in Higher Education, 25(1), 27-47, and Daniel, D. B., & Woody, W. (2013). E-textbooks at what cost? Performance and use of electronic v. print texts. Computers & Education, 18-23.

STANDARDIZED TESTING: FAIR OR NOT?

by Dr. John Poulsen
and Kurtis Hewson

Abstract

Standardized testing in some circles is demonized as the vilest form of assessment. These individuals point to many problems with how these tests are created and administered, as well how the results are used. In other circles standardized testing represents true assessment whereby individual performances can be compared to other performances in a meaningful manner. That is, standardized testing is seen by some as a fair form of comparison; others do not. Knowing where standardized testing came from and what were the motivations for its growth, may help in understanding and perhaps in being able to use the results of standardized tests to improve teaching and learning. This article serves as an overview of the history and current realities of standardized testing.

Introduction

Considering the role standardized testing has acquired in education systems internationally, one can safely assume that a vast majority of Canadians have experienced these tests as students. More and more students' lives are becoming influenced by standardized testing, as a societal push for educational accountability has led to a dramatic increase in the use of these assessments across districts and nations (Guskey & Jung, 2013). Their value is much debated by educators, academics, and politicians, but what is clear is that their use seems to be increasing rather than decreasing. Experiencing standardized tests as students can provide a useful perspective, however, it is important that faculty and students have a general understanding of the history of standardized or high-stakes testing, as well as a basic overview of the how these assessments are built.

This article will explore the history of standardized testing, recent developments within standardized testing, creation of test questions, and applicability.

Definition

Stiggins (2008) states that

> these once-a-year tests are not likely to be of much value to classroom teachers as you plan and carry out day-to-day instruction. They are assessments OF learning that are too infrequent, broad in focus, and slow in returning results to inform the ongoing array of daily decisions. But this does not mean that these tests are without purpose or value. They can communicate valuable information about students' achievement status to other decision makers (pp. 347-348).

This relatively rational statement could be considered a definition of the battle lines that have been drawn up between those who are proponents of standardized tests and those against them.

The intent in standardized testing is to have large numbers of students write a single test, then to compare any single score against all others to see how an individual's score compares to the large sample. The results are then posted on a bell curve that indicates where a score sits within descriptive statistical standards. Standardized tests are given to large groups numbering at least in the thousands, sometimes millions. In order to make the results as valid as possible, thus "standardizing" the administration of the assessment, the tests are:

- written at the same time and same day for all students,
- administered with consistent instructions,
- allowed the same amount of time for each student to write the test, and
- scored in the same manner.

Scantron is a common method of marking bubble sheets of multiple-choice style questions. Essays are marked by specialists who have been trained to mark in similar fashion.

Burke (1999) maintains that traditionally "standardized" meant that the test is standard or the same in three ways: (a) format/questions, (b) instructions, and (c) time allotment. Format/questions means that the test questions are the same for all students writing the exam. The information that the students are to show they know is asked of them in the same format that is usually multiple choice. Multiple choice is the format of choice because as Stiggins (2008) suggests, "It is relatively easy to develop, administer, and score in large numbers" (p. 354). Further, in order for the test to be fair in the sense of all students having the same chance to answer each question correctly, all questions must be the same.

The instructions are to be the same as well. These are to be delivered in the same way to all students so that no students are advantaged or disadvantaged. The last standardization is time allotment. All students are to be given the same amount of time to finish the exam.

However, the standardization of standardized exams is being eroded. Common changes to standardized testing allow certain students to have more than the allotted amount of time. Some students with certain learning needs are now allowed to have more time than other students to complete the exam. These students are then often allowed to write in different rooms as well.

The second requirement of standardized tests is also frequently adapted. Students with reading problems can get "readers" to read the questions. The rationale behind this is that the curriculum asks that students know certain information. Whether the students know this information is the purpose of the exam, not whether the students can read. These readers may adapt the standardized instructions that the students receive. Also, reading the questions to the students may give them an advantage or disadvantage other students do not have. Therefore, the second and third requirements of standardized testing are no longer strongly in effect.

There are other forms of standardized testing that are available other than multiple-choice questions, for example, essay writing. This form of testing currently has the disadvantage of needing markers to assess the essays. Essay markers must be trained to gain a sense of what the standards are. Then they must engage in the time-consuming activity of reading the essays. Even with the training assessors can give significantly different grades to an essay.

Proponents of standardized testing point to large-scale use of the tests that go beyond the individual student or even the school. Standardized testing allows comparison between provincial education systems or even national education systems. Advocates say that standardized tests are impartial and rational. They state that standardized tests are an inexpensive way to check that schools and teachers are accountable, that students and therefore the public are getting the education that public dollars are paying for. Standardized tests by this measure are intended to examine the whole education system and therefore individual scores may be not as significant.

> *"... the standardization of standardized exams is being eroded."*

History

The history of standardized testing is underpinned by noble sentiments. Testing can be found in all cultures. Evaluating the understanding of someone learning a new skill is common for all societies. Standardized testing as we know it today began in earnest in China as a form of aptitude testing, trying to ascertain who would be best at a particular job. Fletcher (2009) states that, "The earliest record of standardized testing comes from China, where hopefuls for government jobs had to fill out examinations testing their knowledge of Confucian philosophy and poetry." These exams started in about 100 CE but

were firmly established during the Sui Dynasty in 605 CE. They attempted to predict aptitude by discerning the best candidates for the Chinese civil service.

The most recent impetus to standardized testing was the Industrial Revolution and the movement to increased schooling where students were moved out of the work force and into schools. One of the easiest and arguably the cheapest way to test large numbers of those children was with a standardized exam.

Alfred Binet (1857-1911) and Theodore Simon (1872-1961) developed what is now commonly known as an IQ Test, beginning in the late 1800s and culminating with the Binet-Simon scale in 1905. These intelligence tests were created in response to the French government wanting to develop special education classes for students who were not benefiting from the newly instituted regular compulsory education program. The tests tried to identify students who needed focused education in order to maximize their education. These standardized tests were an attempt to streamline education so that society would gain maximum benefit from each citizen, a noble sentiment.

The test contained problems arranged in order of difficulty in a range of subjects but had as the basis items assessing comprehension, reasoning, and judgment (Reynolds, Livingston, & Willson, 2009). Louis Terman (1877-1956), who was teaching at the time at Stanford University, noted the success of these exams and their potential applicability in America. He spearheaded the creation of the Stanford-Binet Test which remains, in its fifth iteration, the most popular IQ testing vehicle in existence.

Fletcher (2009) suggests that "… by World War I, standardized testing was standard practice: aptitude quizzes called Army Mental Tests were conducted to assign U.S. servicemen jobs during the war effort." Robert Yerkes was one of the academics assigned to test the servicemen and then suggest appropriate placement. This testing of servicemen helped build up a record of statistical evidence for IQ testing. Carl Brigham worked with Yerkes in the testing of servicemen. After the war he published a book, A Study of American Intelligence, based on the results in World War I. From this finding and analysis he created the Scholastic Aptitude Test (SAT) in 1926. Its intention was to screen college applicants to insure the worthy candidates were allowed admission. The test became immediately popular and by 1945 it became a standard method of college and university entrance, again a noble enterprise.

Everett Linquist invented the American College Test (ACT) in 1959 as a competitor to the SAT. In 2011, more than 3.3 million individuals wrote SAT and ACT exams. The ACT is considered more of a test of accumulated knowledge while the SAT is thought to test logic. Other important standardized exams are the Medical College Admission Test (MCAT) and the Graduate Management Admission Test (GMAT).

These standardized tests that attempt to predict success or aptitude seem to be successful. Reynolds, Livingston, and Willson (2009) state, "As a general rule, research has shown with considerable consistency that contemporary intelligence tests are good predictors of academic success" (p. 334). Fishman and Pasanella (1960) reviewed SAT predictive validity in the 1950s, finding that the median correlation between student first-year success and the SAT score was a significant 0.61. Recently Kobrin, Patterson, Shaw, Mattern, and Barbuti (2008) found a correlation of 0.29, a respectable correlation between SAT scores and First Year Grade Point Average (FYGPA).

In Alberta, standardized testing began in the 1960s. McEwen (1995) suggests that Alberta's introduction of achievement testing for Grades 3, 6, and 9 was done in response to a worldwide wave of educational reform that wanted more accountability in education. At the Grade 12 level, diploma exams were reinstated in 1984 after being removed for a few years. McEwen clarifies the reason for the achievement tests:

Public education is funded by taxpayers who want and have a right to know if they are getting value for their investment. Such accountability requires public information. An indicator system is a tool to focus reform and to improve accountability by providing better information about the education system's performance. The goals, or intended benefits, of implementing indicator systems are to assess the effectiveness and efficiency of the educational

enterprise, to improve education, and to provide a mechanism for accountability (p. 28).

Pros and Cons of Standardized Testing

The primary conundrums in standardized testing of achievement lie in the validity and applicability of the test results. Validity relates to how accurately the test results actually reflect the students' knowledge about the subject. Standardized tests use a minimum number of questions and getting even one or two wrong due to environmental reasons will affect the individual student's results. The factors that affect a student getting a question right or wrong may be infinite and could be organized into (a) situational/environmental confounding factors, (b) personal/emotional factors, and (c) grade-spread requirement in standardized testing.

Situational/Environmental Factors

Even though standardized testing attempts to minimize confounding variables by requiring students to write in similar situations, it may be that some students are writing in situations that are significantly different from other students, for example, it might be too bright or too dark or even too cold or too hot. The testing conditions may cause students to perform poorly such as when students might miss questions not because they do not know the material but for something as simple as the testing centre had poor lighting that caused headaches in students, or because the testing room was too cold and did not allow certain students to focus.

Personal/Emotional Factors

Students who are poor test takers because of nerves associated with tests may not be able to show what they can accomplish in the high-stakes atmosphere of standardized testing. Their anxiety becomes the determining factor of how well they do the test, not whether they know the material. Even students who are normally good test takers can have a skewed result; for example, a student who had an emotional moment just before the test might not be able to focus and receives a result that is not reflective of his or her capabilities.

Grade-Spread Requirement

Perhaps the primary concern with achievement standardized testing is that testing should be based on curricular outcomes that are mandated by the provincial or state governing bodies. Standardized tests have to make a one-size-fits-all test that will not fit all because as Popham (1999) says, "… standardized achievement tests will invariably contain a number of items that are not aligned with what's emphasized in a particular setting" (p. 331). A 1983 study of alignment between textbook content and the standardized test found that, "In no case was even 50 percent of a test's content satisfactorily addressed in any textbook" (Popham, p. 331). That is, there was a poor correlation between what was in the test and in the textbooks that were a prime resource to prepare students for the test.

Test creators seek a score spread in their questions. They seek questions that are not answered correctly by too many students. Questions that are answered correctly by more than 60% of the students are usually removed from the test. Popham indicates this is a problem because "… items on which students perform well often cover the content that, because of its importance, teachers stress" (p. 332). So the important material that is required by the curriculum is often not tested.

How questions are determined to be most worthy for standardized testing is important. When deciding which questions to use, test creators, in essence, try to find questions that only the top 50% of the students will get right. These types of questions are popular in standardized testing because they support the common theory of testing whereby the highest achieving students answer the questions correctly. So, standardized tests can be self-affirming. Students who are in the top 50% of the class answered the questions correctly because they are in the top 50% of the class.

Further, if a concept is taught to all students in a class and all students answer the question correctly, that question will not be used in the future as it does not spread the students' scores so that fine-grained norm-referenced numbers can be associated with each student. That is, if all students did well on the test then there would be no bell curve and the associate connection with where each student sits on the curve. Put more simply, there have to be questions that are only answered by about 50% of the students in order for comparisons to be made.

A student's socio-economic status is highly correlated to standardized achievement test scores. This is probably due to the tests being skewed to reflect learning that children gain at home. Again there is a curriculum and testing mismatch. For example, if a question asks about a "field of work" such as law or medicine, students whose parents are in such professions may understand the concept from conversations at home. However, students whose parents work in the service industry or work at the local grocery store may not. Answering the question correctly may not be a function of what was learned at school but rather what has been learned out of school. Antagonists to standardized achievement testing suggest that it is not fair to check on student achievement that is not in the curriculum.

What instructors or textbooks focus on may not be reflected in the test. The requirement for a score spread in the exams means that questions that are answered by a majority of students will probably be removed because they do not discriminate enough.

Conclusion

The history of standardized testing suggests that the impetus for large-scale testing has been based on noble aspirations, primarily that of having the right person in the right place, whether that place is the correct job in the military or the correct form of education. Standardized testing has value in today's society. Aptitude testing for admission into colleges and universities seems to be especially effective as quantitative research has established links between such testing and later success at post-secondary institutions.

Achievement testing has issues especially related to situational/environmental factors, personal/emotional factors, and grade-spread requirement that may make applicability difficult to ascertain. That is, standardized testing may be best at determining aptitude or future ability in an individual and also good at examining a school district's efficaciousness. Standardized tests seem to be weaker at being able to correctly indicate how much a specific student has learned.

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TEACHING DEVELOPMENT PROGRAM

2013-2014 SCHEDULE

WORKSHOPS

Effective Course Design: Objectives, Outcomes, and Big Ideas (Fall)

Wednesday, Oct 9

3:00-5:00

L 1168

Student Assessment: Creating Evidence of Student Learning (Fall)

Wednesday, Nov 6

3:00-5:00

L 1168

Planning for Effective Instruction: Teaching for Student Learning (Spring)

Wednesday, Jan 29

3:00-5:00

location tbd

Strategies for Student Engagement: Learning Environments and Contexts (Spring)

Wednesday,

Mar 19

3:00-5:00

location tbd

TUTORIALS

Creating a Scoring Rubric (Fall)

Thursday, Sept 19
3:00-5:00
L 1050

Dealing with Students (Fall)

Thursday, Nov 21

3:00-5:00
L 1050

Using Classroom Technology (Spring)

Thursday, Jan 16
3:00-5:00
location tbd

Creating Effective Presentation Materials (Spring)

Thursday, Feb 27
3:00-5:00
location tbd

NO NEED TO REGISTER! JUST DROP-IN AND JOIN US!

For more information about these programs, as well as other events the Teaching Centre has to offer, please visit www.uleth.ca/teachingcentre or call us at 403.380.1856

[HE]ART OF TEACHING

by Dr. Michelle Hogue, Dr. Jason Laurendeau and Dr. Sheila McManus

Have you ever wished that you could have more open, confidential conversations with colleagues, where you could share your successes, challenges, worries, and big (or little) ideas about what you might do in the classroom? So did we!

Back in the fall of 2012, six faculty members from six different departments and three different faculties started talking about ways to increase the number of peer-to-peer conversations about teaching at the University of Lethbridge. In addition to the many new initiatives the Teaching Centre has launched to improve teaching and learning at U of L, we -- Michelle Hogue, Harold Jansen, Phil Jones, Jason Laurendeau, Sheila McManus, and John Sheriff -- wanted to create an informal drop-in space for relaxed, confidential peer support with people who've been there. We envisioned it as a place where new and experienced faculty could stop by, share ideas, get feedback, brag about their teaching successes, and vent about the challenges. (He)art of Teaching was the result! We began in December 2012 -- every three weeks or so two of us (the pairs rotate) met in a quiet room on campus to talk about teaching.

Each of us became involved in this initiative because we're always looking for new and better ways to do what we love to do -- teach! Collectively, we have a broad range of interests, including such things as peer-evaluation methods, exam-free course structures, alternative exam strategies (e.g., pyramid exams), distance learning, hands-on and applied learning, and fostering discussion about difficult topics in the classroom.

We started again in August with a special themed drop-in for sharing and getting feedback on course outlines. We'll continue throughout the 2013-14 year, every three weeks or so -- see the Teaching Centre website for more information, or check out our digital signs and colourful postcards. Please join us -- we'd love to hear YOUR ideas!

MARK YOUR CALENDAR

TALKING ABOUT TEACHING

Disrupting Your Regular Teaching Program

September 20, 2013
2:00 - 4:00 PM L1168

The Teaching Centre will be hosting a Talking About Teaching session focused on innovative strategies and technologies that can help you disrupt the regular grind of your class and help students better engage with you, fellow students, and the materials in the course.

Horror Stories from the Classroom

October 25, 2013
2:00 - 4:00 PM L1168

Every instructor has had a horrible classroom experience. Many times after having these experiences there is time to reflect, calm down, gather some feedback and develop some new strategies. The Teaching Centre will be exploring Horror Stories from the Classroom in October and we would like you to share your experience with us.

Rejuvenating Your Teaching Drive

November 15, 2013
2:00 - 4:00 pm L1168

[HE]ART OF TEACHING

Tuesday, September 17, 2013

9:00 - 11:00 am

D635
Facilitators: John Sheriff and Harold Jansen

Wednesday, October 16, 2013

9:00 - 11:00 am

D635
Facilitators: Jason Laurendeau and Sheila McManus

Thursday, November 14, 2013

12:00 noon - 2:00 pm
D635
Facilitators: Michelle Hogue and Harold Jansen

Wednesday, December 4, 2013

12:00 noon - 2:00 pm
D635
Facilitators: Jason Laurendeau and John Sheriff

GTA PD

Assessment: Marking and Grading

Wednesday, September 25, 2013

3:00 - 5:00 pm

L1168

Thursday, September 26,2013

3:00 - 5:00 pm

L1050

Creating an Effective Scoring Guide

Wednesday, October 2, 2013

3:00 - 5:00 pm

L1168

Dealing Professionally with Students

Wednesday, October 16, 2013

3:00 - 5:00 pm

L1168

Thursday, October 17, 2013

3:00 - 5:00 pm

L1050

Effective Classroom Management

Wednesday, November 13, 2013

3:00 - 5:00 pm

L1168

Thursday, November 14, 2013

3:00 - 5:00 pm

L1050

Introduction to Public Speaking part 1

Thursday, November 28, 2013

3:00 - 5:00 pm

L1050

Introduction to Public Speaking part 2

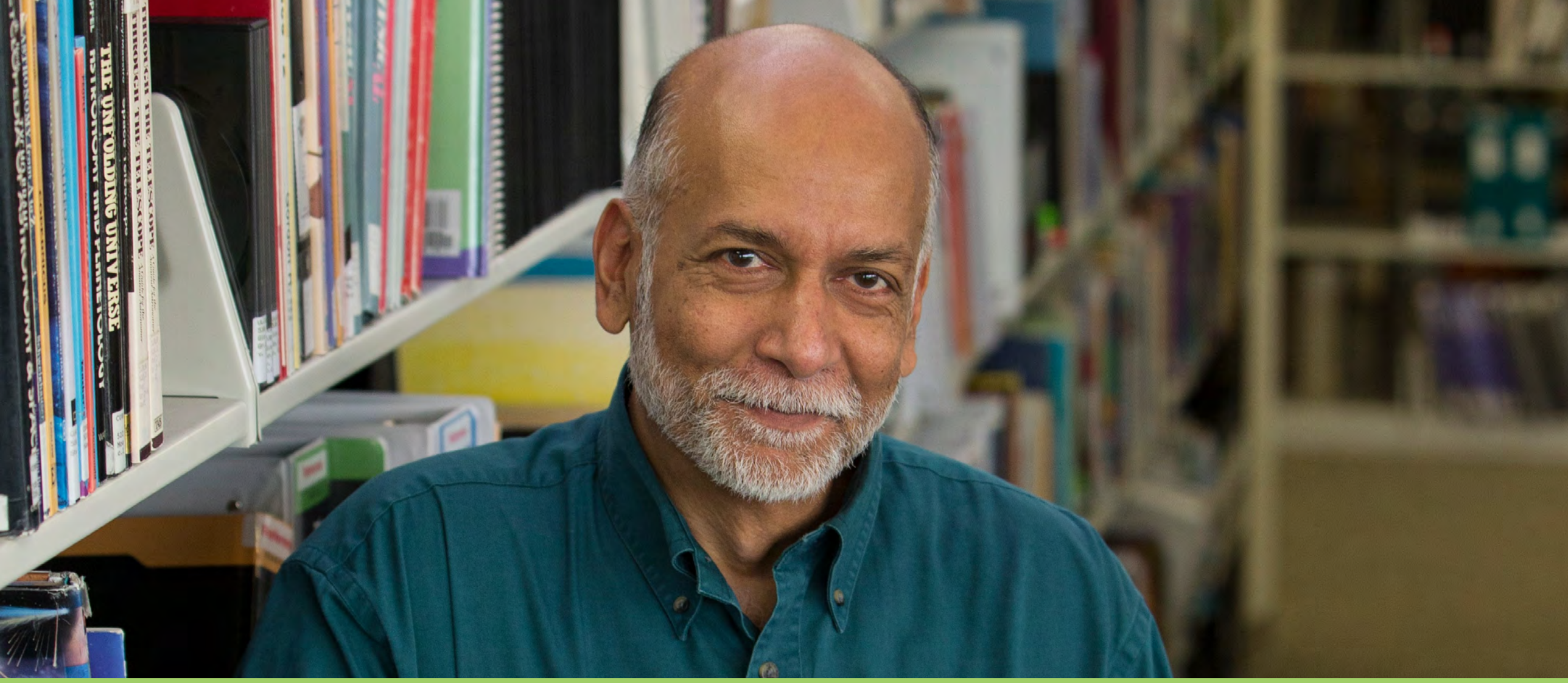
Thursday, December 5, 2013

3:00 - 5:00 pm

L1050

WE LOOK FORWARD TO SEEING YOU AT OUR NEXT EVENT!

For more information about upcoming events the Teaching Centre has to offer, or to add these events to your own calendar, please visit:
http://www.uleth.ca/teachingcentre/events



Light ON TEACHING

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Light ON TEACHING

We want your submissions.

We accept submissions of articles year round, but only publish in September. All submissions due by June 1st, 2014.

Here are some ideas for submissions:

- Innovative assessment ideas that you are exploring
- Your experience with online or blended teaching modalities
- Teaching related top 5 and top 10 lists
- Opinion pieces on the changing higher education environment
- Collaborative articles from faculty and graduate students
- The graduate student teaching assistant experience
- New faculty experiences
- Horror stories from the classroom
- Humorous experiences related to teaching

Submit your articles, ideas and questions to
teachingcentre@uleth.ca

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