Conference Program

Team-Based Learning

May 31 and June 1, 2007
Vancouver, Canada
University of British Columbia Robson Square

UBC

Conference
Team-Based Learning
May 31 and June 1, 2007 Vancouver, Canada
Hosted by Centre for Instructional Support Faculty of Applied Science University of British Columbia

UBC

*W*elcome to the 2007 Team-Based Learning Conference

On behalf of the entire planning committee, I'd like to welcome you to the conference and thank you for coming.

Every year, this conference presents a unique opportunity for all of us who teach with Team-Based Learning (TBL) to gather and share what we have learned in our classrooms and take our practice to the next level of impact for our students and reward for ourselves.

Several things about this year's conference are particularly exciting:

We are continuing the tradition of excellence established by conferences on TBL in the health professions that go back half a decade. It is gratifying (though not surprising) to see TBL's popularity continue to grow.

We are expanding to include more disciplines and methods. The health professions make a strong showing as usual this year, but we also welcome presenters who use TBL to teach writing, psychology, statistics, engineering, computer science, and more.

We are exploring new tools, methods and even contexts for TBL. This year we'll see several new computer-based tools, methods many have used to "tweak" TBL to best fit their discipline, perspectives some have taken on the ever-thorny issue of peer-evaluations, and even thoughts about how TBL might be used to recruit students in the first place.

Finally, we are honoring a core value of the TBL community. As a TBL practitioner, you are committed to helping your students learn more together than they ever could alone. That same commitment is what has driven us to make this a conference worthy of the time and energy of such a special group of people.

For that reason, please do not hesitate to contact me during the conference if there is anything the planning committee can do to help make the experience a richer, easier experience for you.

It is truly my honor to welcome you to this gathering of extraordinary teachers and the ideas, insights, enthusiasm and fellowship we will all share in the next two days.

Sincerely,
Jim Sibley, on behalf of the organizing committee
Centre for Instructional Support, University of British Columbia

Conference Policies

Please wear your name badge at all time. It verifies your registration and provides access to refreshment and meal services.

Presenter Services

Available from 8:00 am to 4:00 pm each day in Room C215.

Computer Access

Wireless connectivity is available in all meeting rooms and public spaces at UBC-Robson Square. To log in to the wireless network, you need a laptop or PDA with a Wi-Fi compatible card and the conference username and password. Log-in information is available in your conference package or at the registration desk. Computers for checking email are available at presenter services in Room C215.

Podcasting

With the permission of the presenters, many of the sessions will be PODcasted. If you have questions or concerns about your privacy and the use of the PODcasts, please contact Jim Sibley (jim.sibley@ubc.ca)

Conference Proceedings

The 2007 TBL conference proceedings will be posted online after the conference at www. teambased.org. You will be notified by email when they are available.

Refreshments and Events

- Coffee, Tea and muffins will be provided both mornings starting at 7:30
- Coffee, Tea and other beverages will be provided both days after the keynote sessions and each afternoon.
- Each day at 12:00 lunch will be provide in the foyer adjacent to room C300
- At the end of day one, appetizers and a bar service will accompany the Poster session in the Plaza Level (up one level from conference level)

Conference and Session Evaluations

Please take the opportunity to complete the session evaluation forms after each session.

Shortly, after the conference, you will receive an email inviting you to complete an online evaluation about your conference experience. Please complete this evaluation – it helps us understand your needs and better plan next year's conference.

Maps

Maps of Downtown Vancouver and Robson Square are available on page 29.

Conference Committee

Jim Sibley, Conference Chair, University of British Columbia
jim.sibley@ubc.ca

Sophie Spiridonoff, University of British Columbia
sophie.spiridonoff@ubc.ca

Michael Sweet, University of Texas
msweet@austin.utexas.edu

Derek Lane, University of Kentucky
Derek.Lane@uky.edu

Dean Parmelee, Wright State University
dean.parmelee@wright.edu

Larry Michaelsen, Central Missouri State
lmichaelsen@cmsu1.cmsu.edu

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- Epstein Educational
  http://www.epsteineducation.com

- Team-Based Learning Collaborative
  http://www.tlcollaborative.org

TBL Conference 2007
Day One – Thursday May 31, 2007

7:30-8:15	Registration and Coffee
8:15–9:30	Fink Keynote Room C300
9:30–9:45	Coffee

9:45–10:45	Workshop 1 Changing the Learning Environment in Residency Education Room C150	Similarities/ Differences between Writing and Programming Room C180	Using Self and Peer Assessment in TBL Room HSBC	Workshop 2 Experience TBL as a Health Profession Educator Room C300
11:00-12:00		TBL and Business Strategy Games Room C180	TBL in Psychiatry- Resident Training Room HSBC	
12:00–1:30	Lunch - Foyer			
1:30–2:30	Workshop 3 Making Student Thinking Visible: Strategies to create engaging classroom team experiences Room C150	Workshop 4 From Didactic to TBL: an exercise in transformation Room C180	Enhancing a Sim-Man Experience using TBL in 1st year Med School Room HSBC	
3:00–4:00			TBL in the medical school admissions process: A pilot and feasibility study. Room HSBC	
4:00-6:00	Posters: Online Peer Evaluation, Open source software for team formation, Implementing TBL in Nursing, Medical Students' Attitudes About Team-Based Learning in a Pre- Clinical Curriculum Reception - Plaza Level			

TBL Conference 2007
Day Two – Friday June 1, 2007

7:30-8:30	Registration and Coffee			
8:30–9:30	Michaelsen Keynote Room C300			
9:30 – 9:45	Coffee			
9:45–10:45	Peer Evaluation in TBL: A student developed approach Room C150	How to Facilitate a TBL Workshop at your Institution Room C180	Fine-tuning TBL Components to Teach Undergraduate Statistics Room HSBC	
11:00–12:00	Learning Theory Group Development & Readiness Assurance Room C150	Utilizing TBL in Nursing How to Incorporate Peer Evaluation Room C180	TBL and Writing for the World of Work: A Natural Fit? Room HSBC	
12:00–1:30	Lunch – Room C300 Michaelsen Q & A			
1:30–2:30	Supporting TBL with a Faculty Learning Community Room C150	How Teaching Engineering Design Looks Different from a TBL Perspective Room C180	Stepping it Up: Combining Team-Based Learning and Critical Thinking Strategies Room HSBC	
2:30-3:00	Coffee			
3:00–4:00	To Adopt or Not Adopt TBL: A diffusion of innovation analysis Room C150	Introducing a Computer Testing System that replaces the IF-AT Room C180	Comparing TBL Strategies with Lecture and Standardized Patient Scenarios Room HSBC	
4:00–4:30	Closing - Room C300			

Keynote Session

Thursday May 31, 2007 8:15–9:30
Room C 300

L. Dee Fink Plenary Address

Team-Based Learning: What Makes It So Distinctive and So Important?

What distinct characteristics make TBL different from other teaching strategies? What is it that makes these distinctive characteristics so important, when teaching in the Health Professions and other disciplines? This keynote will lay the foundation for our 2 day journey, and help us prepare to learn and understand more about the special teaching strategy we call "Team-Based Learning" (TBL).

Dr. L. Dee Fink is currently a national and international consultant in higher education. He works with colleges and universities, accrediting associations, disciplinary associations, and special purpose organizations – to find better ways of promoting significant learning and high impact teaching in higher education. In 2004-2005 he was president of the Professional and Organizational Development [POD] Network in Higher Education, the major national organization for faculty development in the United States. He served as the founding director of the Instructional Development Program at the University of Oklahoma from 1979 until his retirement from that university in 2005.

He worked with Larry Michaelsen and Arletta Knight to co-edit "Team-Based Learning: A Transformative Use of Small Groups in College Teaching (Stylus, 2004). He also authored another book that was published in 2003 on instructional design, "Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses" (Jossey-Bass, 2003).

His professional website is: www.finkconsulting.info.

Discipline Session One:

Understanding the TBL Divide: Examining the Similarities and Differences between Writing and Programming

Thursday May 31, 2007 9:45 to 10:45
Room C 180
Keith J. Whittington, Rochester Institute of Technology

Despite initial positive experiences, TBL methodologies tend to break down during the software implementation process as students revert to individualistic, introverted, and competitive behaviors. The presenter argues that by understanding the challenges and approaches in the writing domain, educators can take a different approach to address the challenges in programming.

The presentation will start with group discussions regarding what parts of the TBL process are effective in the computing classroom with minimal adaptation and followed by soliciting input regarding the various challenges using TBL in a computing and/or writing classroom. The purpose is to demonstrate the parallels between these two domains. This will be followed by a discussion of a number of techniques and experiments employed in the classroom to overcome TBL deployment challenges. In addition, formative, qualitative, and quantitative data will be shared that demonstrate the effectiveness of the adaptation of TBL in the classroom. The presentation will conclude by addressing the continuing challenges and possible solutions.

Discipline Session Two:

Using Self and Peer Assessment in the Team-Based Learning Process at Indiana University School of Medicine – South Bend

Thursday May 31, 2007 9:45 to 10:45
Room HSBC
Stacey A. Jackson, M.S., Indiana University School of Medicine – South Bend
William C. Hamlett, Ph.D., Indiana University School of Medicine – South Bend **Rudolph M. Navari**, M.D., Ph.D., Indiana University School of Medicine – South Bend

This session will offer insight into the use of self and peer assessment techniques utilized in TBL infused courses at IUSM-SB. We will discuss the process for forming the TBL groups, in-class student training on giving effective feedback, and evaluation methods/tools administered. We will explain the process of self and peer assessment and will describe the implementation of this technique at IUSM-SB within TBL groups. This will include what training occurred with the students, the integrated technology involved, and the reporting and evaluation methodology.

Fifteen minutes will be reserved for questions and open dialogue about other schools utilizing various forms of self/peer assessment and how this process can be implemented.

Thursday 9:45-12:00

Workshop One:

Changing the Learning Environment in Residency Education

Thursday May 31, 2007 9:45 to 12:00
Room C 150
Kevin M. Means, M.D., University of Arkansas College of Medicine
Nancy Andrews Collins, University of Arkansas College of Medicine
Michael E. Petty, Ph.D., University of Arkansas College of Medicine

Team-based Learning (TBL) provides a viable alternative methodology that requires high levels of accountability, interactivity, and use of higher order thinking skills for diagnostic reasoning.

Presenters will offer their experiences in conceptualizing rationale for introducing TBL in Residency Education, gaining faculty involvement, training faculty, and implementing TBL in two separate residency programs.

The planned outcome for the session is a plan-of-action for anyone considering TBL implementation in a residency program which includes potential bottlenecks and pitfalls. A tentative checklist will be offered that can be modified to accommodate the peculiarities of each participant's programmatic situation.

Workshop Two:

Experiencing TBL as a Health Professions Educator

Thursday May 31, 2007 9:45 to 12:00
Room C 300
Dean Parmelee, M.D. Boonshoft School of Medicine, Wright State University

This workshop is designed for educators in the health professions who know very little about TBL and want to learn how to get started. Participants will experience all of the key components of the process: pre-assigned reading; team formation; IRAT & GRAT using the IFAT format; application exercise and appeals. Although the time will be too short for genuine 'peer evaluation,' we will discuss the options for conducting this important component with health professions students. During the 2 ¼ hour workshop, there will be sufficient time for 'sidebar' questions and answers with the instructor. Each participant will receive a folder of information on TBL, sample IRATs and Applications from health professional programs, and have the opportunity to network with other instructors who are considering TBL for their coursework.

Discipline Session Three:

Team-Based Learning and the Business Strategy Game used simultaneously in a Business Strategy Course; are the two compatible?

Thursday May 31, 2007 11:00 to 12:00
Room C 180
Robert A. Herring III, School of Business and Economics, Winston-Salem State University

The use of Team-Based Learning (TBL) in conjunction with use of the Business Strategy Game (BSG) (http://www.bsg-online.com/) in an undergraduate Business Policy course has been found to be highly successful. The BSG is a completely online simulation exercise where teams of students run an athletic footwear company in head-to-head competition against companies run by other class members.

The use of the two teaching methods simultaneously involved some compromises, the primary tradeoffs being the size and composition of the groups.

Report findings based upon the spring 2007 semester's experience of three Business Policy classes, plus another management course being conducted in TBL mode will be presented. This provids a rich opportunity to obtain feedback from the students, allowing for comparison of their experiences in their two classes. Other observational and questionnaire results from the Business Policy classes will be presented.

Discipline Session Four:

Implementing Team-Based Instructional Strategies in Psychiatry Resident Cognitive-Behavioral Therapy Training

Thursday May 31, 2007 11:00 to 12:00
Room HSBC
Kim A. Coon, University of Oklahoma College of Medicine, Tulsa
Bryan K. Touchet, University of Oklahoma College of Medicine, Tulsa

To augment the psychotherapy educational instruction for our psychiatry-training program a modified form of TBL was implemented. The Cognitive-Behavioral Therapy (CBT) training module followed the classic TBL phases for instruction. In Phase I, a PowerPoint presentation was posted online for residents to access the learning materials prior to didactics with assigned home practice and readings. In Phase II, the didactic session began with the Motivational Assessment tool (MAT). Each MAT was designed to evaluate the residents' acquisition and understanding of the weekly key learning concepts. Phase III of

our CBT training activities involved applying the new learning to realistic case material and included group projects that required the residents to synthesize and apply what they learned from Phases I and II. To evaluate this instructional method, residents were given a pre- and post-test assessment of cognitive-behavioral therapy tenets using a validated instrument.

Thursday 12:00-1:30 **Lunch - Foyer**

Thursday 1:30-2:30

Discipline Session Five:

Enhancing a Sim-Man Experience in Cardiovascular and Respiratory Physiology for First Year Medical Students through the Implementation of Team-based Learning

Thursday May 31, 2007 1:30 to 2:30
Room HSBC
James Pasley, PhD; Michael Petty, PhD; Michael Jennings, PhD; Michael **Soulsby**, PhD; Juan Firnhaber, MD; Mauricio Palacios, MD; Jennifer White, MS Departments of Physiology & Biophysics, Anesthesiology and Office of Educational Development, University of Arkansas for Medical Sciences (UAMS) College of Medicine

Human Patient Simulation (Sim-Man, Laerdal) was introduced into the physiology curriculum during the Spring of 2003. Team-based Learning was implemented in the Spring of 2005. Students were systematically assigned to 26 groups of 6 students based upon last name. Individual and group readiness assurance tests (RATs) were given to the students the day prior to the simulation to assess their content knowledge on topics related to the simulator. Three Sim-Man simulators were used to allow for appropriate group size. Each group had 20 minutes in the simulator then all three groups met together for a 20 minute debriefing of the experience. The application phase occurred in a large classroom setting during the next class period.

The greatest surprise from previous experience was teachable moments that occurred between group RAT and the Sim-Man experience. The content expert/group interaction was not planned, but occurred naturally with all groups.

Workshop Three:

Making Student Thinking Visible: Strategies to create engaging and reportable classroom team experiences

Thursday May 31, 2007 1:30 to 4:00
    Room C 150
    Jim Sibley, Faculty of Applied Science, University of British Columbia

One of the very powerful aspects of Team-Based Learning occurs when the student teams simultaneously report their decisions in large class settings. We currently use a variety of methods for this reporting, including hand paddles, coloured sheets of paper, overheads, excel spreadsheets, Google docs, clickers and a few others. Effective reporting is one of the TBL cornerstones and really gives the instructor the opportunity to look out to the class and SEE STUDENT THINKING. Since it provides rich discussion starting points, and allows both student and instructor to easily see contrasts in student thinking and decision making, it is important that it is effectively planned and facilitated.

This session will explore how to create powerful in-class team activities, as well as how to effectively facilitate their implementation and reporting.

Workshop Four:

From Didactic to Team-Based Learning: an exercise in transformation

Thursday May 31, 2007 1:30 to 4:00
Room C 180
Lindsay Davidson, School of Medicine, Queen's University

Participants will help develop a step-wise process to aid the transformation of a traditional course into a team-based learning experience. Teams will work together to analyze the components of a didactic course, identifying themes and developing modular units suitable for translation into a Team-based learning model. A practical approach will be emphasized, transferable to a variety of disciplines. Approximately 70% of the session will be devoted to group activities with the balance consisting of the presentation the facilitator's personal experience transforming the Queen's School of Medicine undergraduate musculoskeletal course from a didactic to a blended e-learning/team-based learning model.

Discipline Session Six:

Team-based learning (TBL) in the medical school admissions process: A pilot and feasibility study.

Thursday May 31, 2007 3:00 to 4:00
Room HSBC
Sandy Cook, PhD, Duke-NUS Graduate Medical School Singapore
Robert K. Kamei, MD, Duke-NUS Graduate Medical School Singapore

This session will be an exploration of the value and feasibility of using TBL in the medical school admissions process.

The purposes of using TBL during the applicant interview day were to find a way to inform the applicants of the primary teaching methodology being used and to be able to observe applicants engaged in discussions, debates, and critical thinking, in hopes of gaining more insights to their character, personality, and potential intellectual contribution to the medical school.

As a recruitment tool, the use of TBL appears very successful in giving applicants a taste of the learning environment and making the applicant day unique and fun. For the facilitators, it was a exceptional opportunity to see all candidates in a less formal setting and see them being engaged in critical thinking and the learning process

Thursday 4:00-6:00 Reception and Poster - Upper Plaza Level

Poster One:

Implementing Team Based Learning in a Baccalaureate Nursing Program

Mona P. Klose, MS, RN, CPHQ, Nursing Department, Jamestown College
Sarah B. Fuchs, BSN, RN, C, Nursing Department, Jamestown College

To encourage students to think critically, work as a team, and become life long learners (all essential skills for nursing), Team Based Learning (TBL) was implemented in a 300 level Bachelors in Science Nursing class with second semester nursing students.

There are many driving external forces for healthcare providers to assure quality of care for all patients. In addition, the volume of health information is doubling every 5 years. At the same time, today's generation of nursing students is increasingly diverse. Students possess various styles of learning along with higher expectations of faculty and themselves. These factors challenge nursing education programs to meet the needs of the student populations and continue to

ensure baccalaureate prepared graduate nurses can think critically and possess the knowledge, skills and abilities needed to meet the demands of the profession.

With the increased volume of health information, as well as students' desire for feedback and partnerships in learning, passive teaching/learning strategies and rote memorization will not always suffice to meet these demands. This poster session will include strategies used to introduce TBL to students, classroom activities utilized, assessment of learning, and student evaluation of TBL methodologies. Successes as well as barriers will be presented.

Poster Two:

Innovative Team Learning to Promote Clinician Trainee Success in Peer Reviewed Grant Funding: A Pilot Feasibility Study

Fay Warnock, RN, PhD School of Nursing, University of British Columbia
Jim Sibley, Faculty of Applied Science, University of British Columbia

F Warnock, J. Sibley. University of British Columbia, Vancouver, BC.
We combined Team-Based Learning (TBL) with skills in grantsmanship to (1) assess the feasibility of the combined approach for use in small sized classes and to (2) pilot its effectiveness in preparing clinician trainees to produce a methodologically sound national peer reviewed operating grant. The combined approach was integrated into a university graduate quantitative method and design course and delivered to a convenience sample of five trainees in 12 weekly 3hr sessions. A three stage TBL instructional sequence was used to structure teaching and interactive learning. Outcomes included knowledge on research design and methods, student independent critique and creation of a CIHR operating grant (CIHR operating grant evaluation criteria), student perception of the combined approach on their learning (7 item 4 point scale) and two peer teaching evaluations.

Students rated the TBL testing sessions as effective in consolidating their understanding and the interactive in-class activities to promote complex design decision making; these findings are similar to those reported for TBL in large class sizes. Findings indicate the combined approach can be applied in small classes to successfully preparing clinician trainees for highly competitive national grant peer review

Poster Three:

Team-Based Learning in an OB/Gyn Medical Student Clerkship

Katrina R. Davis, MD, University of Arkansas for Medical Sciences

The purpose of this study is to apply team-based learning in the setting of our OB/GYN clerkship with the expected effect of improving performance on the National Board of Medical Examiners subject exam.

The OB/Gyn department restructured its Wednesday morning lecture series. Traditionally, students were pre-assigned reading from the course textbook and began the Wednesday sessions with multiple choice quizzes on the information. They subsequently participated in faculty lectures over a two-hour period based on the assigned reading.

The TBL curriculum was instituted July 1, 2006. At that time, the students continued to have pre-assigned reading from the same textbook. However, the lecture sessions began with a multiple-choice individual readiness assurance test (IRAT) and group readiness assurance test (GRAT) with feedback via immediate feedback assessment technique cards (IFA-T). The teams were then given a specified amount of time to appeal the stated correct answers as a unit. Next, the teams tackled application exercises consisting of cases with associated questions that promoted higher-level thinking and required a working knowledge of the topics expressed within the assigned reading. Faculty lectures participated as facilitators to promote team interaction and maintain focus on the assigned tasks during the sessions.

At the end of the clerkship, the students provided written, anonymous peer evaluations for each of their team members. Finally, in accordance with the usual format, each student took the NBME subject exam on the last day of the clerkship. Written reports of scores on the NBME were typically received by the clerkship director 2-3 weeks later.

Poster Four:

Medical Students' Attitudes About Team-Based Learning in a Pre- Clinical Curriculum

Dean Parmelee, M.D., Dan DeStephen, PhD, Nicole Borges, PhD

Team-Based Learning was integrated into one medical school's pre-clinical curriculum in 2002. This study compared how medical students' attitudes about the Team-Based Learning process changed between the first and second year of medical school.

180 students responded to 19 statements on a Likert scale regarding their attitudes about Team-Based Learning during their first and second year of medical school. Statements were grouped using 5
categories: Satisfaction with Team Experience, Team Impact on Learning, Satisfaction with Peer Evaluation, Team Impact on Clinical Reasoning Ability, and Professional Development. Data were analyzed using a Mann- Whitney test.

Significant changes in attitudes were in Professional Development, Satisfaction with Team Experience, and Satisfaction with Peer Evaluation.

More positive attitudes were noted for Professional Development and

Satisfaction with Peer Evaluation during the first year of medical school, whereas more positive attitudes about Satisfaction with Team Experience were noted during the second year.

Poster Five:

Open-Source Academic Tool Kit; TeamMaker, GroupWiki, iPeer and TeamTest

Sophie Spiridonoff, Faculty of Applied Science, University of British Columbia

These 4 tools simplify the work flow and logistics faced by instructors who are conducting team based courses and peer evaluations in group and team environments. All four Open-Source applications are being developed by the Centre for Instructional Support at the University of British Columbia.

- iPeer (Online Peer Evaluation) allows instructors to develop and deliver simple or rubric-based peer evaluations to students. (Over 1500 downloads)
- GroupWiki is a self administrated private course Wiki environment.
- TeamMaker allows instructors to form teams based on a survey results.
- TeamTest is a synchronous on-line testing environment for teams, integrated with chat.

We will be introducing the work flow and the logic behind the design of all these four Open-Source applications. TeamTest will be available in first quarter 2008. The Open-Source Academic Tool Kit is freely available for download.

Keynote Session

Friday June 1, 2007 8:30–9:30
Room C 300

Larry K. Michaelsen Plenary Address

What is the state of the art for TBL? Collecting and reflecting on community wisdom

TBL is about people sharing what they know and so I want you to share what you know and let me share what I know. Based on results from a recent survey of the TBL community (TBL Collaborative and Team Learning Listserve), I will highlight the successes you have shared, issues you still struggling to resolve and the range of advice that you would give to a colleague trying TBL for the first time. I will then offer my personal impressions and interpretations of that collected wisdom. The overall objective will be to facilitate good teachers sharing wisdom with each other and progressing forward.

Larry K. Michaelsen (Ph.D. in Organizational Psychology from The University of Michigan) David Ross Boyd Professor Emeritus at the University of Oklahoma, Professor of Management at Central Missouri State University, a Carnegie Scholar, a Fulbright Senior Scholar and, former Editor of the Journal of Management Education.

He is active in faculty and staff development activities and has conducted workshops on teaching effectively with small groups in a wide variety of university and, corporate settings. Dr. Michaelsen has also received numerous college, university and national awards for his outstanding teaching and for his pioneering work in two areas. One is the development of Team-Based Learning, a comprehensive small-group based instructional process that is now being used in over 100 academic disciplines and on over 200 campuses in the US and in eight foreign countries.

General Session One:

Peer evaluation in TBL: A student-developed approach to the assessment of peer evaluation in medical education.

Friday June 1, 2007 9:45 to 10:45
Room C 150
Derek R. Lane, Ph.D., College of Communications & Information Studies, University of Kentucky

The exchange of helpful feedback between team members working on student projects is an essential communication activity to increase team productivity and maintain production quality. It is, of course, important to determine what constitutes "helpful" feedback as well as to develop a mechanism using either an internally or externally derived set of procedures and criteria to evaluate the feedback process.

The session will detail how medical students can successfully integrate peer evaluation procedures and criteria to more successfully complete their instructional projects. The session will provide specific details regarding the criterion which is frequently employed as well as the strategies that can be implemented by students in medical courses.

General Session Two:

How to facilitate a TBL workshop at your own institution

Friday June 1, 2007 9:45 to 10:45
Room C 180
Jim Sibley, Faculty of Applied Science, University of British Columbia

In this session, we will explore the important aspects of planning and facilitating an Introduction to Team-Based Learning workshop at your own institution. We will review the important concepts to convey and discuss the use of TBL activities to teach TBL. You will also be provided access to many workshop documents and PowerPoint's to modify for your own use.

The facilitator has presented over 20 TBL workshops, most recently at the 2007 Educuase Learning Initiative Meeting in Atlanta, GA and at the University of California Davis Medical School.

General Session Three:

Fine-tuning TBL Components to Teach Undergraduate Statistics

Friday June 1, 2007 9:45 to 10:45
Room HSBC
Daniel H. Robinson, Department of Educational Psychology, University of Texas

This session will describe our efforts over the past two years to teach undergraduate introductory statistics with TBL. In classes of 70-80 students, we have successfully modified the TBL system described by Michaelsen, Knight and Fink (2002, 2004) in two ways, by modifying both the grade weighting process and the peer evaluation methods.

In this session, we will describe our modified TBL system and provide attendees with several examples of the materials we use – quizzes, team games, tests, etc. It is our hope that we will eventually create an interest group devoted to using TBL to teach statistics.

Friday 11:00-12:00

General Session Four:

How Learning Theories Account for Group Development and Readiness Assurance: Applications of Piaget, Vygotsky and Bandura

Friday June 1, 2007 11:00 to 12:00
Room C 150
Michael S. Sweet, Division of Instructional Innovation and Assessment, University of Texas

Drawing from a recently-published article in Educational Psychology Review (EPR), this session will equip participants with theoretical insights necessary to explain how and why the Readiness Assurance Process (RAP) has the instructional power that it does.

We will describe how learning theories can be used to describe the processes of learning and motivation, and explore how the group development process can be accounted for within each of these three theoretical traditions.

After collaboratively building a grid to graphically organize our theoretical discussion, participants will be given a copy of the EPR article mentioned above, which shows how Sweet & Michaelsen began thinking along these lines last year.

Session will conclude with an additional Q&A stimulated by the presentation and interactive discussion.

General Session Five:

Utilizing Team Based Learning in Nursing Education: How do you incorporate peer evaluation into assessment?

Friday June 1, 2007 11:00 to 12:00
Room C 180
Mona P. Klose, MS, RN, CPHQ, Nursing Department, Jamestown College
Sarah B. Fuchs, BSN, RN, C, Nursing Department, Jamestown College

To encourage Nursing students to think critically, learn to work as a team, and become life long learners (all essential skills for nursing), Team Based Learning (TBL) was implemented in a 300 level Bachelors in Science Nursing class with second semester nursing students.

This session will provide nursing faculty with a forum in which successes and barriers can be discussed, and innovative ideas for classroom activities and assessment methodologies can be shared. Initial session discussion/debate will focus on how to best incorporate peer evaluation into assessment.

General Session Six:

TBL and Writing for the World of Work: A Natural Fit?

Friday June 1, 2007 11:00 to 12:00
Room HSBC
Dr. Maureen Kelly Jonason, English Department, Concordia College

This session will cover the highlights of integrating TBL into a Writing for the World of Work course. There will be a discussion of first experiences with TBL, modifications later made, and students' anecdotal evaluation of their experiences.

Through this circuitous professional journey (read: motley career), the presenter has benefited from learning about many pedagogical approaches, but none has been so practically applicable and immediately practicable as TBL.

Lunch with Larry Michaelsen Q & A

Friday June 1, 2007 12:00–1:30

Room C 300

This lunch will provide an informal opportunity to ask questions and discuss all aspects of TBL with Larry Michaelsen. This session will be facilitated by Derek Lane.

Friday 1:30-2:30

General Session Seven:

Supporting Team-Based Learning with a Faculty Learning Community

Friday June 1, 2007 1:30 to 2:30

Room C 150
Dr. Kathryn R. Ross, Indiana University Kokomo

A Faculty Learning Community (FLC) was created in order to support and sustain efforts to incorporate TBL in the curriculum at Indiana University Kokomo. A faculty learning community is a cross-disciplinary group of six to fifteen faculty who voluntarily interact in an extended, collaborative program to enhance teaching and learning through activities, scholarship, and community building.

Four principles provided a foundation for planning the FLC structure — make it learner-centered, knowledge-centered, assessment-centered, and community-centered.

This session's presenter is an instructional technologist who organized and facilitated the FLC while starting TBL in her own course. The session will use a format that combines interactive group decision-making with stories, insights, and examples taken from the Indiana University Kokomo FLC experience. Guidance, based on that experience, will be offered for planning a Team-Based Learning FLC and deciding on structure, activities, assignments, and rewards.

General Session Eight:

Standing on Our Heads: How Teaching Engineering Design Looks Different from a Team-Based Learning Perspective

Friday June 1, 2007 1:30 to 2:30
Room C 180
Peter Ostafichuk, Department of Mechanical Engineering, University of British Columbia
Antony Hodgson, Department of Mechanical Engineering, University of British Columbia

We are now in the third year of using a Team-Based Learning (TBL) methodology in the mechanical design course of a radically restructured second-year mechanical engineering curriculum at the University of British Columbia. This course is taught in two intensive blocks of four and three weeks, respectively. Each block revolves around a challenging team-based design project, and we have designed all the course content according to a learning taxonomy in which students first gain knowledge, then acquire skills, and finally develop judgment. The course has been very well received by students, with a large majority indicating that they preferred the TBL approach to a conventional lecture-based course. This session will outline the unique features of the TBL approach employed in the course and will examine the lessons learned together with qualitative and quantitative feedback from students.

Through surveys completed during and after the course, students have indicated a strong preference for the TBL format in comparison to a conventional lecture-based format. Students also reported in quantitative surveys that TBL made the course more enjoyable, increased their understanding of course concepts, and was effective in developing team skills. Qualitative feedback from students, as well as observations by instructors, has also been very positive and has mirrored the above findings.

General Session Nine:

Stepping it Up: Combining Team-Based Learning and Critical Thinking Strategies to Increase Student Thinking Skills in College Courses

Friday June 1, 2007 1:30 to 2:30
Room HSBC
Harry J. Meeuwsen, Department of Kinesiology, University of Texas at El Paso

Team-based Learning holds students individually accountable for their preparation and completion of challenging team assignments. Team-based Learning shifts the responsibilities of the instructor from preparing lectures to constructing challenging assignments, providing clear and relevant feedback, and continued learning opportunities.

This session will provide conference participants with hands-on experiences that attempt to illustrate how critical thinking strategies (e.g. Wolcott, 2006) can be integrated into well-designed learning experiences to help students learn content and develop better critical thinking skills. Participants will be given an overview of Wolcott and Lynch's critical thinking model and how it may be integrated in a based TBL structure. They will experience a sample series of in-class assignments for a lower division motor learning and control class in which the Team-based Learning has been used for over 5 years.

Friday 2:30-3:00 **Coffee**

Friday 3:00-4:00

General Session Ten:

To Adopt or Not Adopt Team-based Learning: A Diffusion of Innovations Analysis

Friday June 1, 2007 3:00 to 4:00
Room C 150
Mark Freeman, Faculty of Economics and Business, University of Sydney
Susan McGrath-Champ, Faculty of Economics and Business, University of Sydney

The objective of this session is to report the analysis of innovating with TBL using a diffusion of innovation model. We use Rogers model, now in its fifth edition (2003), extended for suggestions by Frambach and Schillewaert (2002) to analyse the introduction of TBL in a research-intensive Australian university and other stakeholders beyond the main teaching academic. The case study data involves transcripts of interviews with five people involved with the pilot implementation. Stakeholders include the senior teaching academic, a teaching assistant, an academic developer and a technical support professional. Information was gathered concerning the perceived relative advantage of TBL over conventional teaching, cultural compatibility, complexity, trialability and visibility of the innovation, as well as the influence of external variables (such as supply considerations) and characteristics of the organisation.

General Session Eleven:

An Interdisciplinary Course in Spirituality and Clinical Care: Comparing Team-Based Learning Strategies with Lecture and Standardized Patient Scenarios

Friday June 1, 2007 3:00 to 4:00
Room HSBC
Ruth E. Levine, MD, M. Kay Sandor, Ph.D., RN., LPC, AHN-BC
Victor S. Sierpina, MD, Harold Vanderpool, Ph.D. Th.M. Rodger Marion, Ph.D.

The University of Texas Medical Branch, School of Nursing, School of Medicine, Institute for the Medical Humanities, and the School of Allied Health Sciences.

Purpose: To compare three experiences in an interdisciplinary spirituality course.

Method: Nursing, medical and allied health students participated in a one week "Spirituality and Clinical Care" course consisting of conventional lectures, a TBL exercise, and a large group standardized patient (SP) activity. Following each activity, students completed a Classroom Engagement Survey-Interdisciplinary (CES-I) with three subscales: Learner Participation, Learner Enjoyment of Class, and Interdisciplinary Awareness. Analyses were conducted using SPSS t-test or ANOVA.

Findings: 342 students participated.   TBL scores were significantly higher than lecture or SP scores in Learner Participation (Mean=15.4 vs. 11.0 and 10.9, F=224.6, p<.001), Enjoyment of Class (Mean=10.1 vs. 8.6 and 8.4, F=27.4, p<.001), and Interdisciplinary Awareness   (Mean=7.9 vs. 7.1 and 7.2, F=18.4, p<.001). Moreover, following TBL nursing students scored higher than medical students in Learner Participation (Mean=16 vs. 15.2, F=4.9, p<.01) and Learner Enjoyment (Mean=10.9 vs. 9.6, F=9.0, p<.001).

Discussion: Of all methods, students responded best to TBL, adding to the body of knowledge of methods for teaching spirituality to health professions students.

General Session Twelve:

Team-Based Testing: A Computer System to Lighten the Load

Friday June 1, 2007 3:00 to 4:00
Room C 180
Daniel H. Robinson, Department of Educational Psychology, University of Texas
Michael S. Sweet, Division of Instructional Innovation and Assessment, University of Texas

This session will introduce an online testing program called Team-Based Testing (TBT) developed by the Learning Technology Center at the University of Texas. In technology-enabled classrooms, the TBT allows teachers to conduct RAPs in ways that alleviate many of the traditional problems one encounters with paper-and-pencil tests. First, test and item security are easily compromised by distributing paper tests. We try to be diligent in ensuring that each student received only one test but sometimes stapled copies stick together. Second, in full courses, students sit in close quarters when taking tests and the opportunity for peeking at others' answers is tempting. Finally, paper versions of individual and team RAPs always have to be hand-scored which takes a reasonable amount of time. The computer-based testing system we developed allows students to enjoy all the advantages of the RAP while at the same time protecting test security, making it more difficult to copy from another student, and lightening

the instructor' load by automatically recording grades. In this session, we will describe the TBT system and show attendees how it works.
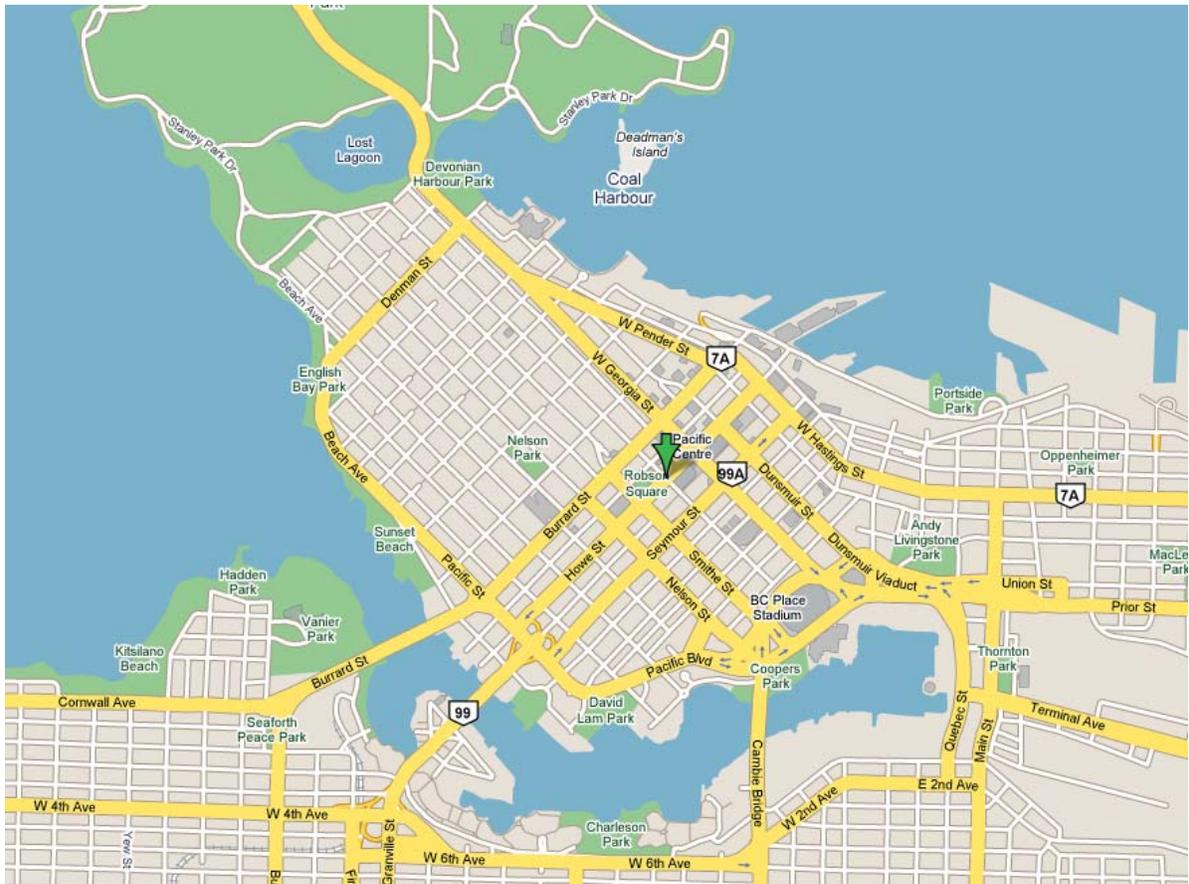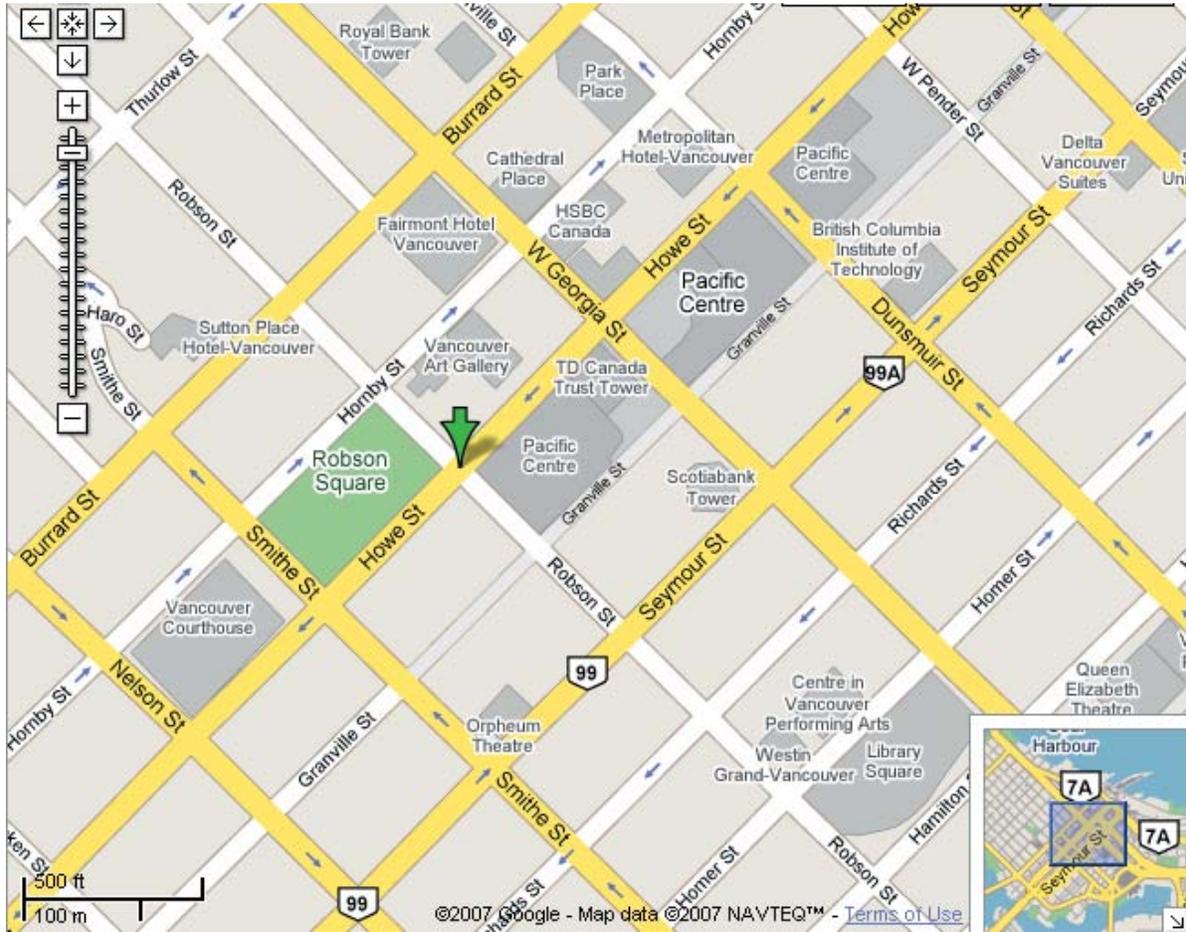
Friday 4:00–4:30

Closing
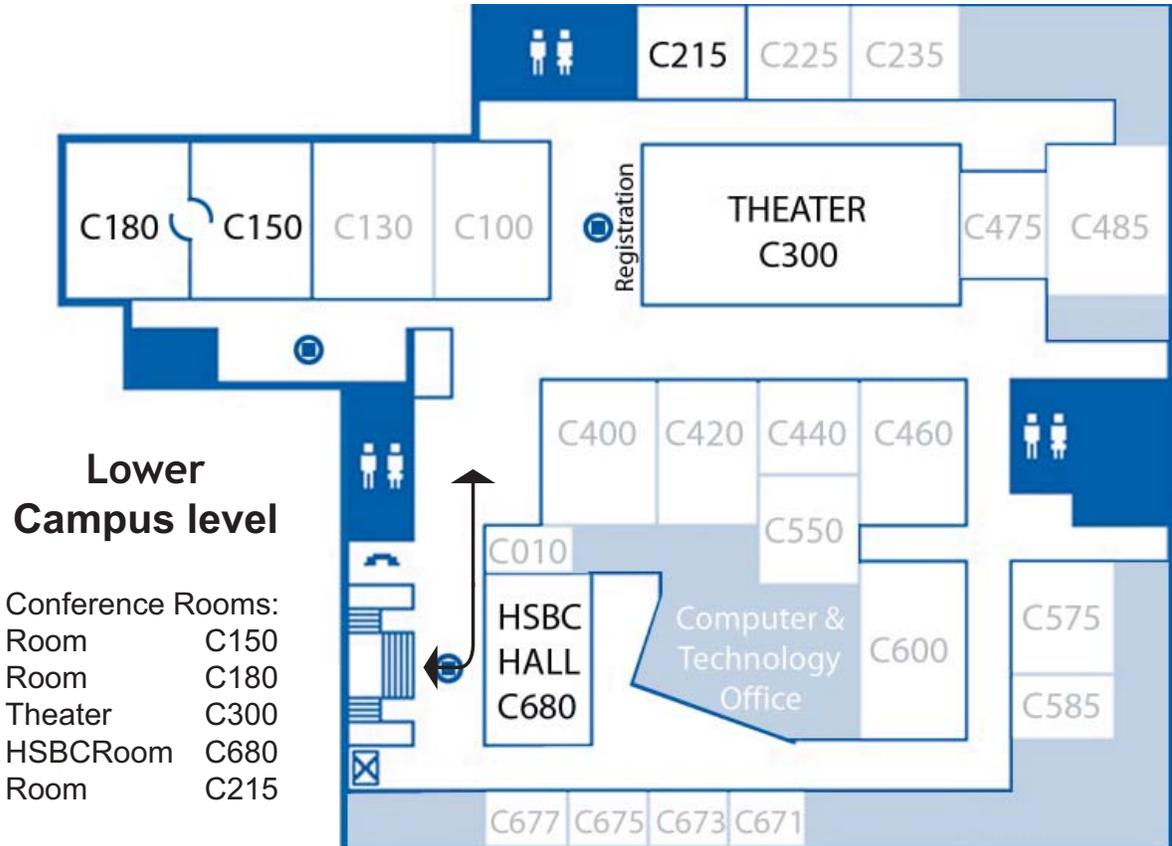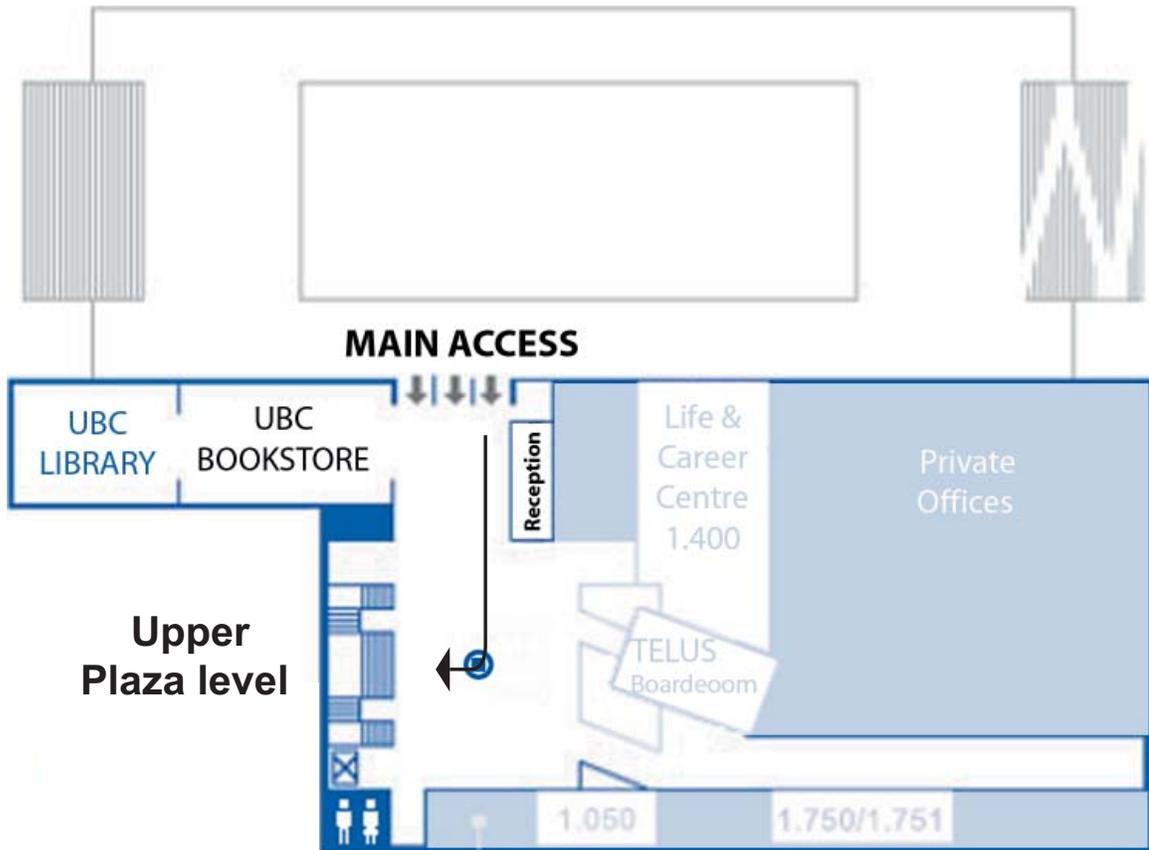
Friday June 1, 2007 4:00 to 4:30
Room C 300

Come join Michael Sweet and other members of the conference organizing committee in a short discussion and reflection upon our two days together. This will be your chance to clarify and integrate everything you have learned at the conference and collaborate with others as we look forward at the coming year. What have you learned that you'd like to try? What still troubles you, despite everything you have seen? We all know that face-to-face problem-solving creates powerful learning, and this may be your last chance to get face-to-face input on your thorny teaching problems from so many other committed TBL practitioners (until next year's conference, of course!)

Thank you and have a safe trip back home.

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1.050
1.750/1.751

Lower Campus level

C215   C225   C235

C180   C150   C130   C100
Registration
THEATER C300
C475   C485

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C550
C010
HSBC HALL C680
Computer & Technology Office
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Conference Rooms:
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Room   C180
Theater   C300
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