

The Higher Education Quality Council of Ontario (HEQCO) presents
Rethinking higher ed: Beyond {the buzzwords}
November 7-8, 2013
Sheraton Centre Toronto

Day One
November 7, 2013

Breakfast Keynote | How technology is igniting educational transformation

John Baker, Desire2Learn

Technology is igniting educational transformation, which is why Desire2Learn is focusing on integrated learning platforms. John Baker wanted to be a doctor during his undergrad but his parents pushed him to take an engineering course, which sparked a passion for design. In that class, he ended up taking on a project where he reinvented the crutch. This made him wonder what other problems he could go out there and solve, and ended up targeting education. How could he help people reach their full potential?

We're transitioning from face-to-face to online and blended learning. Although classes have been traditionally structured around exams and quizzes, we're moving toward an outcomes-based model that focuses on adapting to what students need and one size does not fit all.

Baker praised a number of existing integrated learning platforms: Fanshawe's MOOC on sustainability, Ryerson's Ryecast that live streams ASL interpretation during convocation, and the note-sharing app Binder.

MOOC is a buzzword, but we need to rethink that model – and other existing models – to engage students in online learning in a meaningful way, according to Baker. We may need to scrap exams and try out alternative assessment tools. Two years after graduation, transcripts aren't always used, so how can we change them into something useful?

Learning and knowledge can be used as tools to support community development and will soon transform retail, commerce, banks and other industries. To do this, we must leverage learning to support a talent pipeline. In Singapore, workforce development is linked back to universities. Graduates in the workforce keep students on the pulse of the latest industry trends and enable students to thrive in knowledge economy.

The speed of change is picking up, and the workforce needs to keep up or risk being left behind. Companies that win will be those that invest in learning so employees are able to adapt to changes in the market. At the postsecondary level, this might mean treating the classroom like a meeting, where the instructor posts a PowerPoint online the night before, making class time more effective because it's spent discussing ideas.

Although there are challenges, today's rapidly changing climate of education presents a big opportunity because we have an impact on more students globally than ever before.

Session 1A | Barrier busters: Forging pathways

Institutional supports and partnerships that remove obstacles to and through PSE

Facilitator: Helen Tewolde, Council of Educators of Toronto

Robin Taffler, Work Colleges Consortium

Jim Vanderveken, Mohawk College

H.J. (Tom) Thompson, Olds College

Robin Taffler from the Work Colleges Consortium narrated the genesis of their program, where students work 20 hours a week as part of the diploma. Her institution, Berea College, has a lot of low-income students and little money to employ staff, so students help run all core institutional functions, including research, accounting and business. All students must work and none can buy their way out of service. There are seven colleges in the consortium, including one of the most liberal and one of the most conservative in the United States. Working together develops an expectation of respect, student leadership and authentic community, and fosters a deep appreciation of service. As a result, three of the work colleges have ranked in the top 10 nationally for graduating students with the lowest debt, and those students report that their college better prepared them for their current job.

Jim Vanderveken then talked about the Mohawk Access Strategy, which is focused on major disparities in educational attainment, health and employment in Hamilton Ontario's priority neighbourhoods. He said it is difficult to persuade young people from these communities to take what they see as the risk of a college education. In response, Mohawk reached out to 14 neighbourhoods, using a mobile team of advisors who helped youth identify career goals and educational pathways, a process funded by the college rather than government or industry. Students can get up to \$1,000 off their first year's tuition through this access program, and Mohawk is pioneering a "FutureReady" loyalty card, where future students can earn points toward their education by attending college events.

Tom Thompson addressed the Co-Investment Partnerships at Olds College, talking about programs centred on disruptive innovation in college education. The Learning Campus, a collaboration with Chinook's Edge School Division, aims to tackle the barrier of low participation rates and increasing dropout rates in the high-school-to-college education sectors. By working with partners in private industry and government, Olds has built a health and wellness centre, a learning centre and a multi-media centre, with the specific aim of giving people in rural areas the same centralized facilities that people in urban communities enjoy. Olds has also built a hotel and conference centre with the Pomeroy Group, with the college owning 40% of the hotel. The goal, he said, is to give students work experience and offset the decline in government funding.

Session 1B | Kickstarting careers: New grads and the labour market

What institutions and students need to know, and the tools they require to succeed in the labour market

Facilitator: Paul D. Smith, Canadian Association of Career Educators and Employers

Carol Simpson, Workforce Planning Board

Kamini Sahadeo, Toronto Financial Services Alliance

Matt McQuillen, Career Cruising

Panelists agreed that there is a skills gap, but that it's nuanced, with certain sectors having very specific gaps, and a mismatch between education and rapidly changing needs in the economy. Within the financial services sector, there are skills gaps in compliance and audit, risk management and back office operations, said Sahadeo, adding that it's not a shortage of people, but a lack of people with the right knowledge, technical skills, soft skills and competencies.

There will always be some kind of skills gap, said McQuillen, because our system takes four to five years to educate people, but the economy has rapid and immediate needs. Simpson said there is a skills gap, and we need to match it with education and training. Manufacturing is 20% of the employment base in the Waterloo region, but there aren't enough students in training programs to meet demand, and other programs lack the capacity to train the people needed in the workforce.

Information and Communications Technology has a public relations problem because many students are not aware of opportunities in the sector due to news of layoffs at companies like Research in Motion. Research and surveys show that students don't understand what happens in the ICT sector and may not seek out the appropriate training and education. Sahadeo said this is a danger because much of our future prosperity will rely on innovation in these sectors.

Students in technical fields like engineering and health have better outcomes, but it's not clear why students aren't picking these programs in higher numbers. If the problem truly is an awareness gap, then we've got to fill it so students and parents can make informed decisions, said Sahadeo. Students are "defaulting into masters programs" in hopes of fixing the problem, which is only making it worse. Students need to take a career development approach, Sahadeo added, and look at their competencies and knowledge and think about how that can be applied.

Panelists said employers need to get involved with recruiting and employee training – however, not all employers have the resources for extensive recruiting efforts and internships. Finally, soft skills shouldn't be called "soft," because they are essential for graduates, who might be qualified from a technical and knowledge perspective, but don't necessarily know how to sell themselves or understand the needs of the workplace.

Session 2A | Creative Data: Connecting the dots

Creative ways to use data to support student outcomes

Facilitator: Mireille Duguay, Maritime Provinces Higher Education Commission

Helton M. Aldridge and Roy Smith, Finish Up Florida

Cathy O'Rourke, Loyalist College

Ross Finnie and Stephen Childs, University of Ottawa

Helton M. Aldridge and Roy Smith, Finish Up Florida

Aldridge and Smith were shocked by data that revealed how many Florida postsecondary students drop out after taking a significant number of courses and achieving high marks, or even meeting all requirements but failing to apply for graduation. With the Florida Department of Education, they launched a student completion project dubbed Finish Up Florida. They found that universities had data, but did not have the capacity to go through it and put it to use. Finish Up Florida ran from April-May 2012 to June 2013 on a \$150,000 budget. Initially, a video was created to bring college administrators to a workshop; then each institution's student data were analyzed to produce a target cohort of some 79,000 students who had dropped out within the two years prior to the project. Institutions then began communicating with the targeted students, sending letters that encouraged them to come back and complete their studies. Institutions also needed to be prepared to offer support services, because students "dropped out for a reason." The results: more than 11,000 targeted students graduated and another 19,000 re-enrolled in college.

Cathy O'Rourke, Loyalist College

Data can be used to eliminate or manage problematic behaviour on campus. The goal of a positive data assessment is to mitigate threat, determine the root cause of problematic behaviour and connect students with support services, both on and off campus.

Weekly risk assessments bring together multi-disciplinary staff to discuss incidents and students of concern, and sometimes reveal that students have had multiple touch points with different student services. Data-driven risk assessments are important because without guidelines, staff might engage in an emotionally driven assessment.

Ross Finnie and Stephen Childs, University of Ottawa

The University of Ottawa's Education Policy Research Initiative (EPRI) works with institutions to exploit data to understand and improve student outcomes. Often universities don't have the resources for proper data analysis. EPRI comes up with a work plan to analyze student retention by isolating risk factors. The data can then be used to rate students on their predictive probability of dropping out, allowing an institution to create targeted interventions to improve student success.

Session 2B | Breaking the mold: Young entrepreneurs

Sharing their unique pathways, challenges and successes

Facilitator: Chris Martin, Public Policy Professional

Chris Olah, 2012 Thiel Fellowship Recipient

Brennan McEachran, HitSend

Chris Martin began the discussion by asking what factors contributed to the panelists' success, and what role the education system had played in that success.

Olah holds moderately negative views about his educational experience. One teacher in high school told him he wasn't intellectually mature enough to read higher level textbooks, while others discouraged him from auditing university classes while still in school, or working on open source software, because they claimed it would distract him from his studies. However, Hacklab Toronto and the U of T Mentorship Program were both very positive experiences, as was the Thiel Fellowship. Similarly, McEachran said he was bored in high school and channeled that energy into extra-curricular activities, including student council and being elected school president. Despite this boredom, he appreciated how keeping your doors open to opportunity was a key mantra at school, but arriving at university was the first time he had been told to close all those doors but one, in the form of specializing. McEachran was originally studying programming, but was so far ahead that he worked on business and entrepreneurship to learn how to make money from his skills. Nevertheless, he emphasized that he would not be at this stage if it wasn't for university.

The panelists were then asked about their experience of mentorship. McEachran was exposed to many different entrepreneurs at the Digital Media Zone. Coming from a small town meant that his previous experience of mentorship was mostly online, from Wikipedia and anonymous message boards, but this too proved valuable. Olah also made some key connections at U of T, including one professor who knew how to design his own microprocessor architecture. For him, peer mentorship is also important.

Finally, Martin asked how our universities are doing at fostering entrepreneurship. McEachran replied that universities are a good place for entrepreneurship because they are about freedom of inquiry, but the tension lies in how they try to contain the disruptive forces of entrepreneurship. By contrast, Olah said that he does not think universities should focus on entrepreneurship, because they tend to be more interested in business aspects.

Lunch Keynote

David Helfand, Quest University Canada

In the world according to David Helfand, North American universities are on the verge of an apocalyptic collapse. He referenced the large number of books in the last three years predicting the demise of the modern university. He said that one of the problems is that universities have had too many roles imposed on them, most of which are detrimental to the primary mission of universities: to educate.

Helfand described an occasion when he spoke to a Grade 4 class, and at the end there were 180 questions from 90 students who were burning with curiosity. He then took the bus back to his university class, and the students all sat there silently, just waiting for the class to be over. He said under his breath, "Why aren't you more like 4th graders?" One student responded with "I'm paying for a degree, not an education." Helfand noted that this is not a rare reaction and reflects how we ask students to get grades and a degree in order to get an education.

For most of history, information has been difficult and expensive to access, but now information is unlimited and free. So the old teaching model of pouring knowledge into empty vessels is ridiculous, he said. Our job now is to give students a broad set of tools for how to deal with and synthesize that tsunami of information.

Evolution is another problem. Our brains have evolved for two-way communication, so what do we do? We tell students to keep their mouths shut while the teacher talks. Socializing is equally key to learning, but we de-socialize by dividing the class at desks while we talk. Our brain has evolved for collaboration, but what do we do in universities? We call a group solving a really difficult problem "cheating." University punishes collaboration and rewards selfish individualism for a relatively irrelevant product called grades, said Helfand.

What do we do about this? We start with a blank page for the university for the 21st century, for a class of digital natives to solve the problems of the 21st century. Most universities have too many goals, so at Quest, Helfand said that he and his colleagues decided on one goal: to produce the most effective undergraduate bachelor's education possible. They have no departments or divisions in the circular academic building, and offices are assigned by lottery. Professors are called tutors and they sit at round tables with their students. There are no lectures or PowerPoint slides. It is a different physical structure in a different organizational structure, said Helfand.

The curriculum is liberal arts and sciences, and every student takes the same set of 16 courses, cross-discipline. At the end of the foundation program in second year, students get together with their advisor and establish their question. Together they work out a strategy to answer it, including in what courses and activities that will be involved. Then in the final year, students produce a thesis which responds to that question in a project that they deliver to the entire university.

What was the result of these innovations? A group of university students solved a spherical trigonometry problem that had existed for 200 years, and their advisor had to revise his own publication and acknowledge his students for solving a major problem in the field.

Session 3A | Nature or nurture: Can you teach entrepreneurship?

Perspectives on whether entrepreneurship is a mindset, a skillset, or something in between

*Facilitator: Geoff Malleck, University of Waterloo
Petra Kassun-Mutch, Imagination Catalyst, OCADU
Valerie Fox, Ryerson University
Joseph Wilson, MaRS Discovery District*

Petra Kassun-Mutch, Imagination Catalyst, OCADU

Universities are important networks that help entrepreneurs build support structures, but there is too much romance around entrepreneurship as an employment strategy. Not everyone can be an entrepreneur.

Many entrepreneurs possess courage, curiosity and confidence, but it's hard to nail down the demographics of an entrepreneur, except for one – women are definitely underrepresented. The term has become a catch-all for too many things and can mean anything like good leadership or collaborative skills, which are the same traits needed by a politician or CEO.

Most entrepreneurship is taught outside business schools. Entrepreneurs need mentoring and coaching, and skills to manage money, which should be taught at universities.

Valerie Fox, Ryerson University

Everyone can have the characteristics of an entrepreneur, like confidence and courageousness. There's a lot of learning when you become entrepreneur, and what would normally take a month to learn could be packed into a single day. As a result, students need a great deal of support to complement the rapid pace of learning.

Ryerson's Digital Media Zone supports students who want to work towards something with social or economic impact, and was started outside of curriculum and faculty. Now the space includes a fashion zone, an area for aerospace and more.

Entrepreneurship is a necessity that will teach us how to live in a world that is evolving. We no longer spend 30 years at one company and our systems have to change to reflect that. Regardless of whether or not a particular venture works out, entrepreneurship teaches economic resilience.

Joseph Wilson, MaRS Discovery District

You can teach entrepreneurship, but it's usually not taught in an effective manner. Entrepreneurship is best taught outside of formal curriculum because students need the opportunity to experiment.

People are shocked when they try entrepreneurship and fail, not realizing that successful people often have notches of failures on their belts, or that the average age of a founder is 40-something. Entrepreneurial learning should be project-based and centered on design and user or customer experience. Students need to learn digital literacy, business fundamentals and have access to adjusted-time mentoring.

Entrepreneurs are the ones who get to change the status quo. They need deep subject knowledge in a certain field; otherwise it's not likely they will disrupt that industry. There is currently too much emphasis on engineering and science, and not enough in the humanities and arts. In social innovation the main driver is change, and not making money.

Session 3B | Tech in the classroom: Friend or foe?

The pros and cons of teaching with technology

Facilitator: Joe Kim, McMaster University

Umer Noor, Humber College

Tanner Mirrlees and Shahid Alvi, UOIT

Nancy Walton, Ryerson University

Joe Kim facilitated a discussion panel comprising Umer Noor, a professor of game and physics programming from Humber College; Tanner Mirrlees and Shahid Alvi, professors of media and technology from UOIT; and Nancy Walton, director of e-learning at Ryerson.

Kim began by asking about the costs and benefits of technology in the classroom. For Alvi, the balance frequently lies in the material being taught. If you're doing lots of stats and graphs, those tools can be very helpful, whereas they are less useful with topics like theory. Mirrlees tries to find out how students are responding to the technology, and the results are mixed. Some love the blended, hybrid model, while others would prefer less tech in the classroom. They say that the classroom is a special place: everywhere else in their lives they are hyper-connected and overwhelmed, whereas in class they can concentrate. Walton had a more positive reaction, stating that, especially with difficult material like a fully online ethics course, some students prefer talking about university material online. They can say things they would be uncomfortable saying face-to-face, trying things out before using them in a public space.

The panel was then asked whether technology increases the workload on already stressed instructors. Alvi said yes, especially with the concurrent demand for more original content. Walton also gave an emphatic yes. She does extensive consultation with faculty as director of e-learning, and said this comes up often. The online material has to be updated several times a year, and there's also the question of how far we are redefining the workspace and working hours. Noor emphasized that there are some incredibly exciting tools out there like Questspace, which allows faculty to turn courses into online adventures, but frequently the most exciting ones require the most work. Mirrlees then refocused the conversation onto older faculty, for whom tech can be seen not as a tool but as something that makes demands on their time and teaching approach. They are also rightly suspicious of the efficiency model: does technology merely mean we have to do more work with fewer resources? Kim ended on a more positive note, saying that the use of Google Hangouts has significantly increased attendance at his office hours.

Kim ended with a truism: "If you can be replaced by a video then you probably should be." He asked the panel whether technology changed the way they teach. Alvi replied that technology can't make you laugh, cry, or make you passionate about your subject. A human being can. Mirrlees pointed out that the chalkboard didn't change the fundamentals of grammar. For him it will be an administrative decision whether teachers are replaced by videos. Walton reminisced that 10 years ago she didn't have to teach nursing students how to manage their online profile, but they're online professionals now so she has to teach it. Technology also means she doesn't have to repeat material that is easily found by the students elsewhere: she can focus on the real gaps in their knowledge.

Session 4A | Would you like a MOOC with that?

The explosion of MOOCs and what it really means for students and teachers

Facilitator: Keith Hampson, Acrobatiq, Carnegie Mellon University

Jennifer Campbell, University of Toronto

Wendy Wilson, Fanshawe College

MOOCs can't be based on what instructors do in class, because that doesn't translate well to the online platform. An instructor's personality won't necessarily shine through in the same way on video, which presents the challenge of how to deliver material in an effective manner. Wilson noted that it might be more effective to find someone interested in a topic to go around and interview others, rather than having a "sage on stage" talking at the camera.

MOOCs present many opportunities for research and learning, and can be either recorded or live. Some students want to skip a class because they've taken the corresponding MOOC before they arrive at an institution. However, there are tools to integrate prior MOOC experience, such as testing knowledge with a final exam, or making it mandatory to take another course to replace it.

It can be a challenge to set up the infrastructure and funding to support MOOCs, but the reality is that it doesn't have to cost very much to get started, said Campbell, who added that her first MOOC was created with \$3,000 worth of equipment and a room. Wilson began with a small handheld camera and Microsoft movie suite. Funding at the University of Toronto and Carnegie Mellon University is both internal and from grants, and U of T receives support from the Gates Foundation.

There are opportunities to test out MOOCs in the classroom, said Campbell, who had students watch videos. She began class by handing out worksheets and finding out where students were stuck, which helped her be prepared for "people at home staring at a blank piece of paper."

Wilson and Campbell were quick to dispel fears that MOOC administrators would one day replace instructors, noting that instructors continuously develop new materials for the classroom.

Session 4B | Break on through: Outside the classroom

Alternative avenues for learning

Facilitator: Richard Wiggers, HEQCO

Sunny Lee, Mozilla Foundation

Jay Peterson, Ontario Sheet Metal Workers' and Roofers' Conference

Kane Sarhan, Enstitute

Sunny Lee presented Mozilla's Open Badge Infrastructure (OBI) program as a way for learners to substantiate skills and abilities developed in today's online, non-conventional learning environment. This new system allows learning and skills providers to attach metadata to a badge, comprised of an image file, which details the achievements of the badge holder. This is a response to the gamification of accomplishments, seen in achievements and badges attained in video games and on sites like StackOverflow, where your reputation is reflected by your badges. Unlike these examples, however, Mozilla's OBI is cross-compatible: you carry your achievement badges in your virtual backpack and share them on other sites. Mozilla's aim is to help owners communicate their skills beyond the traditional environment of grades and degrees, leading to greater opportunity.

Jay Peterson then talked about the Ontario Sheet Metal Workers' apprenticeship program for at-risk youth, called Hammer Heads. Its principle goal is to respond to the youth unemployment crisis by offering advice and training to young people for what is often seen as a fallback job, when in reality it is one of the few growth industries in Ontario. Like Mozilla's Open Badge Infrastructure, Hammer Heads is an alternative method for people to make use of their potential. Half of registered apprentices were not aware of their current program when they were in high school, despite a 70% growth in construction in Ontario since 1995. The Hammer Heads responded to Toronto's summer of the gun in 2005 by trying to do something about the number of kids dying from violence. They started linking youth from under-resourced communities to apprenticeship opportunities in the construction industry. They produced a school training model and are trying to improve pathways to apprenticeships throughout the province. This involves expanding the training infrastructure in schools and colleges, which requires support from those schools and from the government.

Lastly, Kane Sarhan told the story of Enstitute. Sarhan dropped out of college three times, sensing that it wasn't helping him; less than 15% of the student's time is spent in the classroom in the US. He started setting up internships and then decided to set up his own university, built on an internship model. When it opened, Enstitute had 500 applications in 30 days for a 10-person program. Enstitute decided to build an apprenticeship program for the 21st century with the goal of producing graduates well prepared for the workforce. The students work at companies getting real-world skills like business design and entrepreneurship, using a structure comprising 80% on-the-job learning, with the remaining time made up of online content, and IRL and community learning. The organization started with 11 students in 2012 with 500 applicants, and will have 100 students by the end of 2013.

Day Two

November 8, 2013

Morning Plenary | Not your grandparents' funding formula

Rejigging the incentive structure to get what [we] want

Facilitator: Steve Paikin, TVO's The Agenda with Steve Paikin

Paul Lingenfelter, State Higher Education Executive Officers Association

Carl Amrhein, University of Alberta

Richard Rhoda, Tennessee Higher Education Commission

Paul Lingenfelter, State Higher Education Executive Officers Association

Higher education is more important than ever, but achieving quality mass higher education is a challenge as governments struggle to deal with population growth and limited resources.

It is wrong to operate on a business model as opposed to an education model. Every state is pushed towards measuring outcomes, but different states attach different importance to quantitative data and analysis of outcomes.

Ontario, and every jurisdiction, needs to think about what it wants to accomplish and put resources behind those priorities. However, funneling money from one program to another could harm both programs as one becomes less efficient and the other less effective.

Carl Amrhein, University of Alberta

In the past, ministers have been reluctant to take on universities. Canada faces huge issues including an aging population and a continuous drop in labour productivity compared to OECD countries. Canada is increasingly a resource-based economy, but ownership of resources is less and less in Canadian hands. Currently, we have mandate creep without any additional funding.

The enrollment model doesn't fund the research, service and professionalization that institutions are doing. We need to move towards a funding model based on success or outcomes; however, you can't just import a model from another system and expect it to work in all of Canada's 13 provincially based systems.

One option is matching funding to outcomes that are important to our economy, where programs like engineering would have lower tuition. Another model aligns the institution to values determined by politicians, but rewriting that social contract would require a conversation between government and citizens.

Richard Rhoda, Tennessee Higher Education Commission

Tennessee moved from an enrolment- to outcomes-based funding model because the old model wasn't working. The state needed more productive education, and when the recession hit, funding could no longer be based on numbers.

All institutions have the same outcomes, but those outcomes have different weights based on the kind of institution they are. What the state needs from a liberal arts degree is different from that of a research institution, and the model is designed to take these differences into account.

The new model measures student progress using a method borrowed from the state of Washington, where it's in the institution's interest to take on disadvantaged students. Now that Tennessee has changed the funding formula, there is room to discuss real policy issues and outcomes. The formula is a policy tool and a means to a greater end.

Session 5A | Teaching: Back to the future

Reimagining the classroom experience

Facilitator: Steve Joordens, University of Toronto, Scarborough

Eileen Herteis, Mount Allison University

Norm Vaughan, Mount Royal University

Steven Mintz, University of Texas System

Facilitator Steve Joordens asked the discussion panel, comprising Eileen Herteis, Norm Vaughan and Steven Mintz, what the right balance is between traditional and online learning strategies. For Vaughan, the balance seems to be working well right now. In the mixed-mode approach to education, the mix of traditional and online components encourages students to take responsibility for scheduling and preparation. Herteis replied that she isn't sure what a traditional approach is anymore. It's often assumed that something that's not online is traditional, and therefore something online is innovative. Mintz was more critical, observing that distance learning often has a bad reputation, and for good reason. It's sometimes the worst vision of a correspondence course: it has no social vision, collaboration or creativity. The web offers a great opportunity for students to engage with public projects: annotated texts, digital stories, simulations and immersive environments. We don't want to produce passive recipients of knowledge, but generate active creators of knowledge.

Joordens then asked about the difference between teaching and learning, and what role technology has in that debate. Herteis asserted that we need to stop using divisive language like teaching being in opposition to learning. For her, the first question shouldn't be "should I be using technology for this," it should be "how are my students going to learn this?" We need to assess faculty incentives: we have a lot of money for teaching innovation, but it seems to only go to teachers who use technology. Mintz concurred, saying that the largest course he ever taught was 592 students, and it was terrible. Joordens teaches a class of 1800. Can you imagine a student straight out of high school walking into that environment? We need to move from the industrial teaching model to a social one, and how we do that in a cost effective manner is a great intellectual challenge that all of us face.

Finally, the panel was asked whether embracing technology necessarily sucks the humanity out of the material, or whether there is a way to retain it. Vaughan gave an example of how UBC has a program where an advisor follows the student all the way through university. Teaching for him is about relationships, and technology can enable that as well as impede it. Herteis responded that, of course, we need a human component. The content is often the least important thing; we're trying to get students to apply human characteristics, like respect, to their behaviour. Technology can allow students to practice this, the online environment can give them the confidence to try or practice it online first before bringing it to the small seminar environment. Mintz gave examples of how implementation can change the effectiveness of technology: in large classes we can use teacher-peer mentors to break up very large courses and give a personal dimension to those classes. Student mentors can also help other students in those courses. We can think of many interesting strategies to socialize education, like team-based teaching.

Session 5B | Add tech, shake well

Using technology to support success in the classroom

Facilitator: Louise Brown, Toronto Star

Michael J. Armstrong, Brock University

Joe Kim, Psychology Neuroscience and Behaviour, McMaster University

Andrew Ainsworth, Humber College

Michael J. Armstrong, Brock University

Most students tend to over-estimate their own abilities. In a climate of self-regulated learning, they respond well to feedback. Armstrong created a predictive model that uses data from courses in previous years to create a formula. When students input their quiz marks from early in the term into a spreadsheet, the formula predicts their final course mark.

More than half of students felt motivated to work harder, a little less than half increased the time they spent studying and about three quarters said they enjoyed the activity. The technique can work for any course with multiple assessments, but may not work well for courses where the bulk of the mark comes from a single assessment like a major term paper.

Joe Kim, Psychology Neuroscience and Behaviour, McMaster University

The way instructors teach is driven by the way they were taught themselves. Lectures are usually designed to deliver primary course content, but it's time to change the method of delivery. It's tempting to think technology is always the right answer, but it must be thoughtfully integrated.

TED Talks inspired Kim's web modules, building upon the tactic of taking big ideas and thinking about how to apply their concepts. Kim focuses lectures around an interesting case study or problem to challenge students, then collects student feedback. Instructors have to be open to new ideas in a changing postsecondary landscape, but courses must be designed from evidence-based practice.

Andrew Ainsworth, Humber College

Ainsworth, who has a background in film editing and directing, noted that the likes and comments that come from a real-life experience posted to social media are very important. Young men aged 18-19 spend 40% of their free time watching YouTube, including rants directed at the camera. Instructors must interact with students in the digital stream, or risk coming across as outsiders.

A great series of web tutorials has the potential to get thousands of hits outside of students in class. To achieve this level of popularity it's important to create a brand, and produce videos of good technical quality with decent audio and features like a transcript that students can click on or off.

Lunch Keynote | Ascension of Asia Pacific Higher Education: Challenges or Opportunities for Canada?

Da Hsuan Feng, National Tsing Hua University

What does the ascension of Asian universities mean for those universities, and what challenges and opportunities will Canada face as a result? Da Hsuan Feng proposed a Canada-Asia-Pacific higher education roadmap.

Just a few decades ago, research in higher education was conducted almost exclusively by Western universities. Now there are 17 top research universities from the Asia-Pacific region banded together in a tight, Confucian higher education research collaboration. There is also a partnership with LERU (the Leading European Research Universities), founded in 2002. Canada also has world-class research universities. However, a Taiwanese student recently visited Canada, and after coming back she asked why the Taiwanese have not heard of these great Canadian institutions.

Taiwan, like Canada, is self-effacing: it tends to underestimate its own importance, and be under-appreciated by those who do not know it. There are valid similarities between Taiwan and Canada, so that means a conversation between Canadian and Taiwanese research universities would be very valuable. To start this conversation, Feng described some major research universities that are probably not on the radar screen of Canadians.

The University of Malaya was founded in 1905, and Malaya is going to spend \$400 million on a world-class health metropolis based there. Binus University in Jakarta is a quasi-private university, receiving some government money and a huge amount of money from China, and it has given three decades of educational excellence. What links these two countries? By 2020, high speed rail will go through Beijing, Laos, Thailand, Malaysia and Singapore. Further, the closest point between Malaysia and Indonesia is 38km, so within a decade there will be a tunnel between the two countries. There will also be a giant bridge between Sumatra and Java.

The interstate highways in the United States transformed the country culturally and economically. Feng is convinced that there will be a similar transformation in the Asia-Pacific region.

For Feng the commonalities between Canadian and Asian universities are academic agility and intellectual courage. There are a lot of similarities between Taiwan and Canada. They are different in size, but population and GDP are very similar. Some of Canada's research universities are the best in the world, and this takes inherent self-confidence. Despite being next to an 800-pound gorilla that is the US, Canada is able to develop universities and successful industries. Canada and Taiwan can work together to develop paths to inherent self-confidence, which you need for intellectual agility and intellectual courage. Universities should be about building a better world for their fellow human beings in the 21st century, and a partnership between the research universities of Canada and Taiwan would be an exciting way to achieve this.

Session 6A | Entrepreneurs: Gotta be startin' somethin'

Initiatives that open doors for students to PSE and beyond

Facilitator: Leslie Church, Google Canada

Suzanne Tyson, HigherEdPoints.com

Hadi and Marwan Aladdin, CoursePeer

Hadi Aladdin described the role of startup software business CoursePeer, designed in response to what he saw as a significant cost and capability shortfall in higher education software. It costs an average of \$300,000 a year per faculty to collect data about learning outcomes, and learning management systems add a further \$120,000 per year cost to the faculty. Hosting these systems on your own servers costs even more, which expands more with every online component you add. CoursePeer is designed to aggregate all of these systems in the cloud, in order to save money and make using the system easier.

Suzanne Tyson from HigherEdPoints.com identified a similarly large gap in the market with her own project, which allows students to pay for their education using Aeroplan points, thus leveraging a huge untapped resource for many families. Like Aladdin, she emphasized the importance of the various connections she has made throughout her career to getting the project off the ground, although where Aladdin had benefitted from institutional organizations like MaRS and UTEST, Tyson relied on years of experience in working with higher education institutions.

Both speakers also identified ease of use and accessibility as a key differentiator of their products. Every time Aladdin uses Facebook and other web 2.0 platforms, he feels the gap in the ease of use and design between those and current learning management systems. Some of the core abilities in higher education software are assessment and surveying tools, which are very difficult to implement with traditional systems. Aladdin argued that they have made CoursePeer easy to use even for technophobes. Unfortunately academic adoption is at least two times slower than enterprise adoption, partially because of fear of trying something new, and this is a major problem we need help to address.

Tyson's impetus for her project was that higher education is good, but expensive to access even for middle class families. HigherEdPoints was born by looking at ways for parents and students to tap into alternative sources of funding. If there are 5 million active loyalty card members with \$100 each, that's \$500 million of untapped currency that could be used to pay for higher education, and Tyson is excited about the possibilities her project offers for diversifying access to higher education.

Session 6B | Cultivating entrepreneurs: After the big idea

Presenting entrepreneurs with the toolkits they need to succeed

Facilitator: Paris Meilleur, Fleishman-Hillard

Helen Kula, University of Toronto Libraries, MaRS Discovery District

Anuj Singhal, Entrepreneurship@UBC

Helen Kula, University of Toronto Libraries, MaRS Discovery District

How well are libraries supporting entrepreneurs? Academic libraries don't always have access to as much licensed content as public libraries, which means they might fall short in crucial areas for entrepreneurs. MaRS partners with universities to foster a culture of entrepreneurship. Libraries need to address entrepreneurs' information needs on the market, customer needs, competitors, resources, intellectual property, and potential investors. Libraries must also offer research expertise and information on how to search.

A 2012-2013 study looked at how well Ontario academic libraries are responding to needs of entrepreneurs on campus. Academic librarians said overall the entrepreneurial community is still emerging, and that while it's rewarding and energizing to work with entrepreneurs, they had concerns around their own expertise and a lack of entrepreneur-focused resources.

MaRS has seen a surge in entrepreneurial activities on campus like hack-a-thons and boot camps, as well as support outside the classroom, usually tied to a school's technology transfer office. Also, postsecondary institutions need to engage women, as there is great underrepresentation of women in entrepreneurship.

Anuj Singhal, Entrepreneurship@UBC

Classrooms can be out of touch with the entrepreneurial reality. Business programs usually start with a business plan, but that doesn't make sense because in the early stages an entrepreneur doesn't know what the business model will be. Instead of the typical focus on locking down one mentor, students should get advice from as many people as possible.

Young entrepreneurs must determine if there is market interest in the product, and gain solid understanding of cash flow. Soft skills like leadership should be seen as fundamental skills. Singhal and Kula agreed that the focus on making solid pitches doesn't predict the ability to build a revenue-making company. Time would be better spent listening for new ideas and serving potential customers.

Students are beginning to see entrepreneurship as a viable option to earn a living, however, student debt can be a barrier to risk-taking. Many MaRS participants have little capital, but it's important to note that ventures in industries like clean tech and life sciences require more funding than information and communication technologies.

Closing Plenary | Media lens: Illuminating or perpetrating

Are education issues exacerbated or enlightened by the media?

Facilitator: Anne McNeilly, Ryerson University

Scott Jaschik, Inside Higher Ed

Simona Chiose, The Globe and Mail

Léo Charbonneau, University Affairs

The most pressing issues facing higher education include the role of government, how technology can best be used in the classroom, student engagement including better integration of international students and a lack of data.

Panelists agreed Canada needs to provide more data on outcomes, so a prospective student could see, for example, the outcome of a political science degree 10 years down the road. More data would aid journalists in telling stories using more than anecdotes. Jaschik noted it's important to have a plan for data, because it may reveal areas that require financial commitment.

The focus then turned to what it takes for a story to make it into the news. In an era of budget cuts, the bar is set very high because there are not enough reporters or newsprint, said Chiose. Questions editors ask include: Has anyone else reported it? How does this affect students and their families?

Panelists said they'd like to see more stories on what it's like to be a non-traditional student, including varied socioeconomic backgrounds, ages and abilities. In addition, some topics have been framed in a problematic manner. MOOCs have been covered as a solution to help at-risk students, but caution must be exercised if there isn't research to back up the claim.

There's no shortage of story ideas in academia, however, it's challenging to cover higher education using journalism's simple narrative structure. And it's also challenging to talk about research in a way that non-experts can understand.

Academics do try to pitch stories about interesting research, but often have to learn to talk differently to the press because "we don't necessarily have PhDs in your field," said Jaschik, adding that professors should think about their role as teachers. Journalists are storytellers, so a good pitch needs to have a clear story, and not just be a topic.

Good pitches might focus on a unique niche or the way research is filling a gap in the world, or what a university has done first and how others are taking those results and building upon them. Some institutions are doing better at highlighting their research in creative ways with video and engaging headlines.