INNOVATION:
THE SHOCK OF THE POSSIBLE
2014 COMMUNITY SUMMIT

FINAL REPORT

Breaking the Mould:
Innovations in Undergraduate Learning

October 22, 2014
Burnaby, BC
ACKNOWLEDGMENTS

What makes a public square vibrant and inviting are the people within it. For our third annual Community Summit, thousands of individuals from BC and beyond contributed in some way to the success of the week. Many thanks to those who made the SFU Public Square 2014 Community Summit their own, travelled from afar to participate, were curious, and embodied the spirit of discovery and engagement. It is you who make SFU Public Square an exciting place for dialogue, exchange, and innovation.

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INTRODUCTION (WHY DID WE DO IT?)

Exploring Innovation In Education

"In today’s undergraduate education system, teachers are now the ‘guide on the side’ rather than the traditional ‘sage on the stage.’” (Laurie Anderson and Kris Magnusson, Vancouver Sun, September 21, 2014).

What does innovation mean, when it comes to education?

The many dimensions of this question were explored by over 130 people from across Canada at Breaking the Mould: Innovations in Undergraduate Learning on October 22, 2014 as part of SFU Public Square’s 2014 Community Summit.

Ideas from innovators in the field pollinated plenary discussions, current innovations in education were showcased, from the gamification of course structure to experiential education, and observations and learnings from current innovative practices provided grounded takeaways for participants.

Innovation in education was collectively discussed not as a singular happening or application, but as an environment that can be encouraged to allow a better learning experience for Canadian undergraduate students.

Writing in the Vancouver Sun in preparation for the conference, SFU Vancouver Executive Director Laurie Anderson and Dean of SFU’s Faculty of Education Kris Magnusson placed the university in the midst of our rapidly changing world. Recognizing that our current Knowledge Age requires people to think and act differently, the two educators posed the question:

“What is the role of the university, and how does it need to change?”

The two conclude their piece by putting forward that for universities to remain meaningful and relevant, innovation needs to continually be promoted, provoked, and questioned.
“[Universities] need to find ways to become more accessible to a wider range of learners. They need to be more responsive to rapid changes. They need to make both the content and the experience of university education more engaging and relevant, and they need to adopt a more visionary stance and a stronger profile of community engagement.

In short, they need to embed innovation into their very DNA, in the same way innovation in knowledge generation (research) and academic freedom (the right to convey and report on knowledge) are essential components of a university.”

Their article reaffirmed the intent of the day: that the universities of today are embracing the need to innovate in order to stay relevant and meaningful for the learners of tomorrow.

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**PROCESS**

*Breaking the Mould: Innovations in Undergraduate Learning* explored innovation, the theme of *SFU Public Square 2014 Community Summit*, through the lens of education. Bringing together leading academics, policy-makers, and innovative educators, the daylong interactive forum opened new windows and sparked conversation on innovation in education.

Held at Simon Fraser University’s Diamond Alumni Centre, the forum featured a mix of collaborative peer learning sessions, workshops facilitated by leading educators, inspirational case studies and keynotes, and a festival of new ideas and programming in undergraduate learning. Breakout sessions were facilitated by leading innovators in educators from across Canada and the United States, and explored current innovations in education, practical steps for integrating innovation into undergraduate education, and how participants could themselves integrate and advance these innovations within their practices.

Breakout session facilitators used a process model that comprised several guiding questions on key themes designed to steer participants through small round table discussions to develop a tangible path forward. A team of SFU Public Square staff and volunteers took detailed notes throughout the day which were used to inform this report.
UNDERSTANDING & EMBRACING CHANGE
Welcome & Keynote

“We need to look beyond the degree. We’ve set up these outcomes, and we can assess our ability to generate knowledge or teach the students the outcomes that we want them to learn, but we have no idea about what they do with the rest of their lives—are we in fact doing the right thing? I think we need to figure out ways to do not only assessments in the classroom and while they are learning, but also to look at the impact on their lives.” —Robert Page, Provost, Arizona State University.

SFU President and Vice-Chancellor Andrew Petter opened the conference by acknowledging both the importance of innovation within undergraduate learning and the issues and tensions that innovations in this field provoke.

Accepting that universities face serious challenges at this time in history, Petter suggested they also have a more important role than ever to play. While vast amounts of information are readily available and accessible, the need to be able to disseminate, analyze, and apply this knowledge to the real world requires tools that the university must develop to provide to its learners.

Petter left attendees with both an encouraging and laudable reminder: that the core responsibility of the university is to teach its students to go beyond factual questions, to ask why and how, and noted that exploring how educators, academics and policy-makers can do a better job of this is a very important endeavor.

“With innovation driving today’s knowledge-based economy, it’s increasingly important for universities to develop innovative undergraduate programming that enhances a student’s critical thinking, problem-solving and research skills that will enable them as graduates to be employable, adaptable global citizens.” —Andrew Petter, University Communications, October 2014
SFU Vice President Academic and Provost, Jon Driver, then introduced the morning keynote, Robert Page, Provost of Arizona State University (ASU). Having realized the needs of its students have changed as significantly as the economy in which it currently operates, Page illustrated how ASU has embedded the idea of innovation into its charter. ASU is no longer solely a place at which students earn degrees, but an institution receptive and adaptive to the challenges faced by its learners.

“ASU is a comprehensive public research university, measured not by whom it excludes but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural, and overall health of the communities it serves.”
—Arizona State University Charter.

Page focused on both the physical and online innovations leveraged to help students succeed. This innovative space, as he described it, includes online degree programs, active and adaptive learning, and educational reform that acknowledges differing learning processes. It also includes partnerships with companies that deliver education products and partnerships with organization to make higher education more accessible for its employees, such as the pioneering of the ASU and Starbucks College Achievement Plan.
Page noted the importance and emergence of the individual learner, and added that through the use of technology and web-based learning innovations, educators are able to shift away from homogeneous styles of teaching to programs designed for individual students, taking into account different rates of learning and individualized outcomes.

“We’re a public institution. We’re linked in to a public mission for the public good. That mission is linked around being accessible, excellent, and providing student opportunities that will lead to their success.” —Robert Page

IDEAS IN 5

While Page’s keynote addressed specific innovations that have been implemented at ASU, the next portion of the morning addressed concepts related to innovation from a broader perspective.

Four ideas were presented by a leading student-centred education innovators, offered new ways in which to understand what innovation can mean to education.

Kieran Egan, Professor, Faculty of Education, SFU, spoke to the power of imagination and the findings of the SFU Imaginative Research Group which revealed that teaching well at the undergraduate level means engaging the imaginations of students.

“All knowledge in the undergraduate curriculum is the product of somebody’s hopes, fears, and ingenuities, and if we want students to learn in a manner that will make that knowledge meaningful and memorable, then we need to bring it to life for them in the context of those hopes, fears, passions, and ingenuities.”

—Kieran Egan

Without bringing education to life for these students, Egan warned that the learning process risks losing much of its original draw.
“Otherwise, the main motivation for learning for most students will remain some distant and uncertain economic payoff instead of immediate pleasure and a developing sense of wonder.” —Kieran Egan

Marlene Scardamalia, Professor, Ontario Institute for Studies in Education of the University of Toronto (OISE), gave participants the opportunity to see what the implementation of innovation can look like by describing her work, and noted that institutions should not only provide environments for collaborative learning and knowledge innovation, but should work to become part of a larger, knowledge-building community.

Accepting that today’s Information Age has opened vast new educational frontiers, Scardamalia posited that it becomes challenging, but not impossible, to make coherent knowledge out of fragmentary language. Shifting from a notion that the end goal of learning is not accumulation of facts, but instead ideas that house the potential for knowledge, Scardamalia left attendees with three challenges to consider in their educational pursuits: bring ideas to the centre of knowledge work, break down developmental barriers, and realign to commit to becoming communities in which answers can be found.
Janet Moore, Associate Professor and Director of SFU’s Semester in Dialogue program, discussed the innovative, experiential learning programs and recommendations for how to face the challenges presented when designing and implementing new and innovative programs in institutional settings often unreceptive to change.

Moore stressed the importance of gaining the understanding and support of leadership both internal and external to the university, to take risks, and create space toward innovative initiatives.

With the proper support to facilitate innovations in learning, contemporary issues in the learning context can be addressed. Moore has experienced this when she implemented innovations involving both dialogue and structure: the cohort makeup of a class helps to combat anxiety and depression issues; the use of co-teaching with community members brings diverse styles and perspectives to class; and when a cohort engages in dialogue, they learn to listen and understand different perspectives. Understanding other’s perspectives, Moore noted, is how we begin to and make positive change in the world.

“Semester in Dialogue originated from this idea that when you graduated with your degree, you would also have this idea of how you would make an impact in the world.” — Janet Moore
“We don’t have to operate on a thirteen-week knowledge-problem paradigm...I think the kind of challenges students are going to be facing are not going to be restricted to a time period.” —Tony Chambers.

Tony Chambers, Professor, OISE and University of Toronto, presented his big idea for innovation in undergraduate with a metaphor: that learning is a contact sport, and that for it to be effective it must be able to be engaging, relevant, and connected to something important to the learner. Chambers also focused on getting students outside of the classroom and participating in service learning, and reevaluating how institutions can assess incoming learners.

Service learning as a social innovation, he observed, connects learners to meaningful civic knowledge and responsibility. The university becomes more embedded within society: relationships are strengthened as the community, rather than the university, defines what it needs from the learner. The relevant, rational, reflective, and relational characteristics of service learning produces learners who achieve higher, think critically, and continue to engage post-graduation.

“Assess based on what we want to have happen, as opposed to what has happened in the past, in order to help students succeed.” —Tony Chambers

Chambers was careful to note, however, that the timing of service learning is often truncated by the semester system. He suggested expanding the boundaries and term periods of university semesters to recognize that learning today happens on a twenty-four hour, seven days a week schedule.

While innovations such as service learning in undergraduate education may be important steps forward, Chambers pointedly acknowledged that many innovations must be embraced fully to reach their potential.
LEARNING FAIR & LEARNING HUB TOUR

At the mid-day break, forum participants had the opportunity to attend a **Learning Fair**, an interactive showcase of innovations and programming in currently operating undergraduate education. A tour of SFU’s Learning Hub, a fully integrated learning environment with technology-enable classrooms, interactive and collaborative space, and a community lounge, that provides space where instructors and students can discover new uses for teaching and learning, was offered.

Several forum participants were asked to share their thoughts on one significant innovation happening in classrooms currently, and what three changes universities can make right now to improve the undergraduate experience and support students. Their answers, which represent a significant contribution to the Canadian undergraduate education research landscape, can be viewed on the SFU Public Square YouTube channel [www.youtube.com/sfupublicsquare].

Ideas in 5 set the context for the discussions and dialogues to follow: innovation is needed, it is very much taking place, and this is how we can learn and be receptive and adaptive to it.
RELATIONSHIPS, LINKAGES AND MAKING THINGS MEANINGFUL

Afternoon Keynote: Kris Magnusson

“The number one dynamic of what makes for good learning is strength of relationships.” —Kris Magnusson.

Kris Magnusson, Dean of SFU’s Faculty of Education, served as the afternoon keynote. Discussing the future of post-secondary education, Magnusson observed that the current suite of innovations in undergraduate learning can be loosely clustered into three areas: developing ways to increase and strengthen the kind of relationships that learners have with their teachers; forming linkages for students in regards to their learning content, their discipline, and to one another; and applying techniques that open up passion and meaning for the learner. Magnusson described these techniques, or innovations, as the ‘micro-activities’ that happen in response to a situation:

“It’s not really a technology, or a planned event that we can do, but it’s an attitude of grabbing what Havighurst called that ‘teachable moment’ and inspiring people through it.” —Kris Magnusson.

Looking ahead, Magnusson recommended modifications that could be made today to better transform the undergraduate learning landscape in Canada. These changes include creating more opportunities for students to experience the world around them; rethinking and reusing the various modalities through which learning can occur, and the dismantling of structure placed on the learning context. Breaking these structures down, Magnusson noted, would help alleviate limits put on learning and make learning a more accessible experience.

Experiencing the world around them may mean students get out of the classroom and into the community, but Magnusson made a wider observation:

“It might also mean learning how research works, and getting involved in the research process from year one. The university is essentially a creator of knowledge...and yet we usually wait until at best the fourth year or likely the graduate programs for students to get involved in knowledge creation— that should happen from year one.”

Enacting these innovations, though, requires adaptability and presents challenges to the current system. Building upon the morning discussions, Magnusson expanded on three shifts that universities are undergoing: moving from information-focused to program-focused; students are no longer perceived as passive receptacles of learning but rather active agents in their own learning, and transforming into more of a conceptual place rather than a physical space.
The relationship of the university with its students and wider community is currently transforming and will adapt and thrive if innovation is embraced. The discussions that followed highlighted many of these successful innovations.

**INNOVATIONS IN LEARNING: BEST PRACTICES**

“Two of my favourite questions that I think all students should have the right to ask their professors at anytime are: Why am I doing this? And what is it good for? And if the instructor does not have a sound answer for that, then maybe they should rethink what they’re getting them to do.” —Katrin Becker, Adjunct Professor, Computer Science & Information Systems, Mount Royal University

**Breakout Session 1**

The first breakout session of the afternoon gave participants the opportunity to discuss their insights from the morning sessions. An interactive discussion explored how universities can move to become more innovative in their approaches to undergraduate learning. The smaller group collaborative format enabled participants to share and identify best practices and experiences by exploring specific examples of innovations in learning. Participants were given the guiding questions:

- What do innovations in learning look like for students?
- What are some cases or examples in BC and other jurisdictions where this is working well and why?
- What new insight or understanding have you gained from what you heard today?

The facilitators at each plenary, experts themselves in innovative education, shared their experiences with innovation, from the formulation to implementation of their ideas. From this, the knowledge sharing of best practices and other key themes began to take form.

Facilitators included:

- Dr. Kim Bates, Professor, Ryerson University
- Dr. Katrin Becker, Professor, Mount Royal University
Breaking the Mould: innovations in undergraduate learning

KEY THEMES

The following themes were drawn from the day’s first breakout session, detailing important takeaways for all who have already, and those that are working toward moving their institutions to a more innovative atmosphere.

“Nothing sounds practical until someone decides to do it.” —Plenary discussion table comment, Breaking the Mould, October 22, 2014

Being adaptable and receptive to change:

As mentioned repeatedly throughout the proceedings, universities are undergoing identity shifts. Being receptive and adaptable in the face of presumed challenges can help facilitate these shifts. It can also mean being adaptive to changing definitions of learning.

- Rethinking terms such as entrepreneurship when considering innovation is an important component of being receptive to change. Facilitator John French of Next 36 suggested that the concept of entrepreneurship does not have to remain in the business world. Instead, applied across departments and woven into curricula, entrepreneurship can spark and facilitate positive social change and can help academically-minded members capitalize on ideas they may not have considered as having an entrepreneurial quality.
“Encourage students to explore and ideate and create just for curiosity’s sake with no specific learning outcomes, no specific definition of what success is: part of the learning is the actual journey. And if they fail and are unsuccessful—then celebrating and exploring what can be learned from that.” —John French, Next 36.

- Being adaptable to the needs of the current generation of learners is an important step forward. The flipped classroom and courses designed according to students’ interests were mentioned as successful measures in adapting to a changing educational context. Placing students in the driver’s seats of their own education can often mean they are required and able to attain a deeper understanding of the material.

“We are truly in the post-textbook, post-lecture world and we need to take the time to understand how students who are Digital Natives are really going to experience our classrooms. I think that’s very difficult for us, unless we go to them and actually talk to them and have experimentation around what the classroom should look like in the future.” —Kim Bates, Associate Professor & Co-Director, Ted Rogers School/Ryerson University

Finding a balance between new and old:

While the need for being more receptive and adaptable to innovation emerged as a key theme, so did the importance of finding balance between innovation and tradition where it’s needed.

- At SFU, Dr. Jungic and Dr. Mulholland have implemented the use of online video lectures and audience response technology, among other innovations, to make first-year calculus interactive and engaging. While remaining within a structured curriculum and time frame, these innovations emphasize peer instruction and interaction. Data from early on, while not scientifically proven, has shown an increase in grade averages for classes in which this technology has been implemented, illustrating that positive and effective innovations can be successfully introduced into current structures when designed appropriately.
Participants discovered that certain innovations may not be effective unless embraced wholly. Exploring the innovation of gamification of the classroom (the application of game mechanics and tools in a non-game context) led researchers to explore whether the tools and techniques of interactive media could motivate the ‘gamer generation’ to study as intensely as they play Candy Crush Saga. Without the true integration of game elements into a course, however, no direct correlation to improved grades was detected. It is in these cases, therefore, that innovation must be truly integrated to be effective and warrants us to question the usefulness of not fully realized educational innovations.

The importance of experience and the positive outcomes of innovation:

Innovation in undergraduate education may not just mean an improved learning experience for students, but better learning outcomes as well.

Stories from plenary discussions emerged of students who tended to do poorly in traditional lecture formats, but excelled when placed in an experiential education environment. Mark Winston of SFU’s Centre for Dialogue recalled a Semester in Dialogue student who came into the course with a low GPA, unable to balance the commitments of academics and the demands of being a university athlete. The student responded so well to the program’s emphasis on cohort learning and use of dialogue, they became the only Semester student to receive a perfect GPA.

Similar success with innovative program designs were echoed by William G. Lindsay, Director, SFU’s Office for Aboriginal Peoples, and Judy Smith, Director, SFU’s Community Education Programs, who discussed how unique innovations in Aboriginal education programs have created opportunities for students to promote their identities, build resilience, and achieve academic success, which has resulted in lower dropout rates.

Finding champions:

In general, participants noted that finding champions and leaders both within and outside of their institutions to understand, support and make space for innovation is crucial to the success of new programs and ideas. Understanding how to navigate both the structure and processes of higher learning institutions and dealing with the challenges that these present were also noted as key factors in the successful implementation of innovation.

How to inspire and encourage through innovation:

Innovations in motivational and technological learning tools in education were discussed by several groups.
“The most compelling innovation in undergraduate learning that I’ve seen is the use of learning outcomes to give students an understanding upfront of any program what skills and knowledge they will learn as part of a particular education program. Learning outcomes are fairly common in some sectors of post secondary education and they’re becoming more common in others, but if the goal of education is to make one privately happy and public useful, then providing students with an upfront understanding of what skills and knowledge they will gain as part of their program will certainly help them understand what role they can play in society.” —Robert Luke, VP Applied Research and Innovation, George Brown College.

- The discussion of badging, or the awarding of ‘micro-credentials,’ was brought forward by a number of participants. Students are now seen as wanting what the market demands from them—inovation and practical skills—and the use of badges can supplement a student’s career goals while navigating the undergraduate learning process. However, while integrating the use of badging into universities can help to create an ecosystem of innovation, some participants noted hesitancy when discussing risk: market saturation and the applicability of badges across disciplines were mentioned.

- Motivation was a major theme in the discussion of gamification of the classroom. When implemented effectively, creative measures, such as gamification, were seen to positively change the dynamic of a course. Allowing students to work and demonstrate their competencies at their own speed, giving students constant assessment throughout a course, and having knowledge and the procurement of knowledge as an intrinsic motivator were provided as supportive rationale.

Participants recognized that while they may hail from different streams of education, many of the challenges they face are similar. This realization helped to set the tone for the next session of the afternoon, which consisted of ten-minute presentations made by the breakout facilitators followed by moderated breakout discussions on creating more receptive atmospheres to innovation in educational institutions.
**STEPS FORWARD**

**Breakout Session 2**

The goal of the second breakout session intended to provide practical steps for institutions, organizations, teachers, and policy makers to move undergraduate education forward. Participants were given the following guiding questions, according to themes at their roundtables:

- What are practical steps for innovating your theme forward?
- What role can each of us play to advance these actions now, over the next year, and over the longer term?
- How can your theme influence undergraduate education?

From these conversations, several understandings became apparent.

What the **student** wants:

As SFU Provost Jon Driver alluded to at the beginning of the forum, the student of today is much different than the student of yesterday. While we may perceive innovations in learning to centre largely upon technological shifts and advancements, there are also cultural and economic shifts at play.

- Participants noted, in general, that while adapting to a generation of Digital Natives requires innovations in technology, it also requires cultural and social innovations. Students are asking for the ability to critically engage, to be active citizens, to learn at their own pace, and to accomplish real-world projects.

- One breakout table stated that teachers need to see themselves not as teaching subjects, but teaching learners. Many observed that the content-based approach of yesterday is irrelevant today. **David Helfand**, President of Quest University, posited that students need quantitative reasoning skills, communication skills and critical thinking skills to succeed today.

  "**Stop lecturing. It’s a demonstrably ineffective way of communicating information which is available through many other channels.**" —**David Helfand, President of Quest University.**

- Echoing the discussion of badges, it was observed that students are also asking for what the market demands of them: the ability to innovate and gain practical skills for when they find their place in the world.
There is no one size fits all:

- The diversity of the forum’s attendees allowed for a range of perspectives to be heard—and a range of backgrounds and challenges to be addressed. What surfaced was a realization that innovation cannot be applied identically across the board. Different universities have different programs, different curriculum styles, and different goals. What works for one program may not work for another, and understanding this can contribute to effective and unique program design.

Collaboration is key:

While this theme began to emerge at the first plenary discussion, it was built upon later in the afternoon.

- Collaboration can take place in many modes of education, from the design of programming with outside partners to students collaborating with one another on group work projects. Cross-discipline projects, mentioned in a discussion on the innovation of learning incubators, have been seen to promote retention, creativity and productivity.

- One participant shared her experience of holding an urban educational field school where the curriculum was co-created with a local First Nations group. Academics, community partners, and guest speakers all provided course content, with one outcome being to restore an urban garden that grew traditional herbs and plants. While not only providing an example of how educators can move beyond traditional educational models, the experience also showcased innovations in multicultural education and collaboration.

Testing is not always the answer:

- In many circumstances, participants noted that the types of assessments and pre-requisites used for university courses are not predicting performance or measuring true student learning. Instead, they can leave students unable to access or successfully navigate university educations. As Director of SFU’s Community Education Program, Judy Smith, asked “What is our definition of success and achievement? We don’t learn on a straight trajectory.” Learning, then, should be made to be more flexible and accessible.
Gamification and collaborative learning were presented as solutions to the issue of traditional institutional assessments of learning. Katrin Becker, Adjunct Professor, Computer Science & Information Systems, Mount Royal University, stated that there is a hypocrisy in thinking that a solitary task, the test, will really benefit a student’s learning abilities.

“How do you expect them to learn from one another or independently? By telling them not to talk to anyone during tests or look around, they won’t know how to get along with one another. Then, we throw them in groups and expect them to have the proper teamwork skills? Impossible. A competitive environment means the student who tends to be organized will overpower and take on the burden of all the work by herself. The less vocal students will decide it’s not worth it to try. Try collaboration and building meaningful projects for the community instead. In games, students are allowed to be leaders of a team through anonymity and are respected for their skills. They learn innovation and strategizing skills.” —Katrin Becker, Adjunct Professor, Mount Royal University

Accepting tensions:

Innovation has its disadvantages just as much as it has its advantages, and the lines between each are often not so clear.

- Two somewhat opposing opinions resulted from a discussion on MOOCs, or Massively Open Online Courses. Some participants were fond of MOOCs, seeing them as capable of making higher education more accessible, allowing students to learn from the ‘stars in the field,’ and supporting universities in their aim to demonstrate their public service mission. However, some were skeptical of the value and purpose of MOOCs, especially when it came to their role in the provision of credentials and whether they are a substitute for learning or a complement.

- Tensions between technological innovation and traditional process arose in the discussion of universities requiring invigilated, face-to-face exams for distance courses. While this places limits on innovation in online education, such as students taking courses from locations around the world, it is a practical concern in regards to cheating—demonstrating that even technological innovations in education have their restrictions.

- Other tensions mentioned with respect to program innovation were the need to maintain standards, the ability to integrate innovative courses into the broader curriculum, the scaling of learning models across the entire university, and the ability and resources to evaluate innovative learning practices.
WHAT DID WE LEARN, AND WHERE DO WE GO FROM HERE?

“The age of the term paper and the final exam are reaching their end” —David Leach, Chair, Department of Writing, University of Victoria

As the conference concluded, the following realizations emerged:

1. The transformation of universities into no longer solely institutions of content provision but also of knowledge mobilization represents both an important step forward and a challenge in itself reaffirming the need for the university to reimagine and rethink its identity and purpose.

2. The great university is not a place that can take an already academically-versed student and give them four years of knowledge without having been otherwise unchanged at the end, a great university should be one that can help everyone.

3. With innovation comes risk, and universities must have a higher tolerance for risk and failure when integrating new opportunities and innovations for learners.

4. Changing demographics present another challenge. Universities need to be able to educate through multicultural, multilingual and multi-historical lenses.

5. Universities need to get better at documenting the impact and value of their educational interventions, as the higher education sector has become increasingly competitive.

6. The university must be able to provide a framework for the learner; how one can make sense of the vast information before them; how one can find the enthusiasm to be adaptive in these challenging times, and where one finds meaning and place in this world. The relationship of the university to its students is a changing relationship that needs to be addressed.

7. There is a general consensus on factors propelling the need for reform in undergraduate education including advances in technology, changes in workplace, and globalization.

8. While there are many interesting and effective innovations underway, there is no coherent framework to follow in terms of institutional reform.
9. Current institutional norms such as grades, scheduling, tuition costs, bureaucratic hierarchy, limited range of instructional methodologies, reward systems for academics privileges research over teaching and learning innovations, and the presence of faculty and program silos all inhibit innovation and reform.

10. The engaged forum audience validates that there is a community in this field searching for answers to these questions.

11. An ongoing conversation about making the undergraduate experience more responsive, engaging and enriching is needed.

12. There is a lack of Canadian visual content regarding the research and documentation of innovations in undergraduate education. This conference hopes to contribute resources and information to an important area of research.

**EVALUATION: THE DAY IN NUMBERS AND COMMENTS**

There were several points throughout the day at which evaluation was conducted. The following describes, on average, the feedback reported from participants at SFU Public Square’s *Breaking the Mould: Innovation in Undergraduate Education*.

**Top takeaways from the conference**

- **82%** New knowledge and insight
- **62%** New contacts
- **52%** New opportunities for collaboration
Attendees found the registration process efficient and friendly.

Attendees thought the opening keynote helped to stimulate their thinking on innovations in education.

Attendees thought the Ideas in 5 session provided innovative models in undergraduate learning.

Attendees thought the afternoon keynote helped stimulate their thinking on how to create more innovative undergraduate learning experiences.
Attendees thought the breakout sessions in the afternoon provided them with an opportunity to learn and exchange ideas with other participants.

Attendees thought the conference provided a constructive venue to discuss innovations in undergraduate learning.

Attendees thought conference participants provided actionable strategies for improving undergraduate learning.

Attendees thought the moderator provided clear explanations, guidance and support throughout the day.

Attendees were overall satisfied with the event.

Attendees were more likely to become involved with similar SFU Public Square conferences, based on this experience.
FAVOURITE SESSIONS

Attendees had a wide variety of favourite forum sessions. Many noted that they enjoyed the guided topic table discussions and breakout sessions, as this format allowed for more in-depth discussion with colleagues and an opportunity to talk informally about possibilities. The small group sessions were also positively noted as allowing for intimate group discussion, idea gathering, and opportunities for each person to participate.

The majority of participants provided positive feedback on Kris Magnusson’s afternoon keynote address, noting that he was very clear, engaging, articulate, and inspiring, and his ideas resonated with them.

The morning keynote by Robert Page was also noted by several participants as particularly enjoyable, as were the Ideas in 5 presentations on innovations in undergraduate learning.

DESIGN & STRUCTURE

Participants supplied valuable feedback on conference design and structure, and commented on what they found most worthwhile.

The mix of perspectives present, the opportunities to network and knowledge share, and the formation of new insights on how to view and understand student success in undergraduate education were all noted by participants as forum highlights.

Participants observed that they would have enjoyed a greater student presence, facilitation across all breakout group sessions, and more time for direct dialogue with participants as opposed to keynote presentations.

WHAT WE WANT TO WORK ON AND WHAT WE’RE HAPPY ABOUT

SFU Public Square also noted several key areas in which to improve and build on when convening future dialogues.

- Engage in wider and greater outreach. While the conference was national in scope, the majority of participants hailed from the Lower Mainland.
Secure funding early. The inability to secure a key SSHRC grant meant the conference was unable to employ several graduate students as planned.

Avoid conflicting schedules. The conference conflicted with an international learning conference held in Quebec, meaning delegates had to choose between two international conferences—ideas and resources were then split geographically.

Consider timing and audience. The forum was convened at an intensive time in the school year for a majority of its audience, i.e. professors.

The forum also generated several firsts and significant achievements for SFU Public Square and the undergraduate education community.

- The forum drew a full house of participants. The topic, content, and knowledge sharing provided was considered a valuable opportunity, which attracted leading educators and innovators from across Canada and the United States.
- The use of multimedia and interviews to capture the conference participants’ ideas throughout the day helped to address a deficit in visual documentation of research and innovations in undergraduate education. These resources serve to amplify and document the conference proceedings and contribute knowledge to an important area of discovery.
- The Federation of the Humanities and Social Science expressed their support for this conference, and want to continue this relationship with SFU.
- SFU’s support enabled SFU Public Square to secure funding to bring in key innovators.
- The forum conversations, both guided and organic, represent the beginnings of an important dialogue in the field.

**CONCLUSION**

Given the challenges presented by a short lead time, this gathering of leading innovators provided an excellent opportunity to advance thinking, ideas, and models in undergraduate learning.

The forum discussions and shared knowledge have fed into a broader national dialogue that is both timely and essential to the landscape of undergraduate education in Canada.

Simon Fraser University and SFU Public Square are committed to playing an important role building on this national dialogue by convening experts, sparking conversation, and encouraging an environment which is receptive to and aware of innovation and the learnings of tomorrow.
PARTICIPANT AFFILIATION AND BIOS

*Breaking the Mould: Innovation in Undergraduate Education* brought educators, policy makers, academics, and learners from across Canada to Simon Fraser University. Learn more about these innovators.

**Conference Moderator**

*Laurie Anderson* is the Executive Director of Simon Fraser University, Vancouver, an Associate of the SFU Centre for Dialogue, and a Facilitator at SFU Public Square. Prior to joining SFU, he worked in the British Columbia elementary school system for twenty-eight years. Laurie obtained his BEd, MA and PhD at SFU, served as a Director on the Canadian Bureau of International Education for six years, and completed the Certificate Program in Conflict Resolution at the Justice Institute of British Columbia. His current areas of interest include contemplative education, the gendering of leadership, and innovation in formal education at all levels.

**Opening Remarks**

*Andrew Petter* is the President and Vice-Chancellor of Simon Fraser University. His previous roles include Dean of the University of Victoria’s Faculty of Law, and Attorney General of British Columbia under the New Democratic Party government of Ujjal Dosanjh. Petter has written extensively in the areas of constitutional law and public policy, including works on the Canadian Charter of Rights and Freedoms and Canadian federalism.

**Context Setting**

*Jon Driver* is the Vice-President Academic and Provost of Simon Fraser University. He is an exceptional leader in cross-disciplinary perspectives in education policy. Since 2010, Jon’s work as Provost has focused on reviewing teaching practices at SFU and exploring how to restructure accreditation practices at the university. His goal is identifying alternative structures to benefit students while empowering departments with the freedom to determine outstanding learning outcomes and objectives.
**Keynote Speaker - Addressing the Issues**

**Kris Magnusson** is Dean of the Faculty of Education at Simon Fraser University and has worked in education administration for over twenty years. Kris held the role of Associate Vice-President, Academic for two years at the University of Lethbridge, and spent additional time teaching at both the University of Calgary and University of Lethbridge. He has written widely on education policy, including the impact of career assessments and evidence-based policy decision-making. Kris also served on a provincial committee for the Advisory Group on Provincial Assessment, which looked at the standardized achievement tests administered in BC at Grades 4 and 7, and reviewed broader issues of provincial exams at high school.

**Visiting Keynote Speaker**

**Provost of Arizona State University**

**Robert E. Page Jr.** is Provost for the University and Foundation Chair of Life Sciences. He was the Vice Provost and Dean of the College of Liberal Arts and Sciences (2011-2013), and the Founding Director of the School of Life Sciences (2004-2011). He joined ASU in 2004 after spending 15 years on the faculty of the University of California, Davis where he served as Chair of Entomology from 1999-2004. His background is in behavior and population genetics and the focus of his current research is on the evolution of complex social behavior.

**Accomplishments**

Dr. Page has published more than 230 research papers and articles, 5 books, and is listed as a “highly-cited author” by the ISI Web of Knowledge, representing the top 1/2 of 1 percent of publishing scientists. He received the Alexander von Humboldt Senior Scientist Award (the Humboldt Prize) in 1995, the highest honor given by the German government to foreign scientists. In 2010 he was elected to the Leopoldina - the German National Academy of Science, the longest continuing academy in the world.

**Ideas in 5 - Four Student Centered Education Innovators**

**Tony Chambers**, prior to serving at University of Toronto as Vice-Provost in 2005, worked at the University of Michigan where he was Associate Director of the National Forum on Higher Education for the Public Good and Adjunct Associate Professor in the Center for the Study of Higher and Postsecondary Education. Tony has written extensively on the subject of reforming PSE. He was an editor of Higher Education for the Public Good: Emerging Voices from a National Movement (2005), and wrote “Toward a Social Justice-Centered Engaged Scholarship: A Public and a Private Good.”
Marlene Scardamalia holds the Presidents’ Chair in Education and Knowledge Technologies at Ontario Institute for Studies in Education of the University of Toronto (OISE) and directs the Institute for Knowledge Innovation and Technology (IKIT)—a worldwide network of innovators advancing the frontiers of knowledge building in various sectors. Her work has led to several honours and awards, including the World Award of Education for innovations in education from the World Cultural Council. The institute she directs received the ORION Learning Award for development of the world’s first collaborative learning environment and research-based innovations in theory, pedagogy, and technology, all aimed at making citizens part of a 21st century knowledge-creating culture.

Kieran Egan is a world-renowned Professor and Researcher at Simon Fraser University’s Faculty of Education and Director of the Centre for Imaginative Education. Kieran is also the Canada Research Chair in Cognitive Development and the Curriculum. Over the course of his career, he has written over twenty books on education and gives frequent talks on the future of education, educational theory, and related subjects. Some of Kieran’s most recent works are *The Future of Education: Reimagining our Schools from the Ground Up*, and *Learning in Depth*.

Janet Moore is Director and Associate Professor at Simon Fraser University’s Semester in Dialogue. She has imagined, designed and facilitated intensive, interdisciplinary courses that focus on community engagement, resilience, lifestyle activism, food systems, group process and urban sustainability. Janet is the Co-Founder and Co-Director of CityStudio—an energetic hub of learning and leadership where students design and implement Greenest City solutions in collaboration with the City of Vancouver and 6 post secondary institutions (Emily Carr, UBC, SFU, VCC, BCIT and Langara).

**Breakout Facilitators - Innovations in Pedagogy**

David Helfand has spent 35 years on the faculty of Columbia University in the City of New York, and more than half of that time as Chair of the Department of Astronomy and Astrophysics. He has served as a Founding Tutor and, since 2008, as President and Vice Chancellor of Quest University Canada. He is also President of the American Astronomical Society, the professional society for astronomers, astrophysicists, planetary scientists and solar physicists in North America.
Katrin Becker is an award winning, internationally known expert in the design and analysis of Serious Games. She holds two degrees in computer science and a PhD in Educational Technology with a focus on instructional game design. Katrin has over 30 years of teaching experience in science, engineering, education and art. She has designed and developed several educational and advertising games. She is the author of a book on the technical aspects of simulations and games written for non-technical people, and teaches at Mount Royal University.

Mark L. Winston has had a distinguished career researching, teaching, writing and commenting on bees and agriculture, environmental issues, and science policy. Mark’s work has appeared in numerous books, commentary columns for the Vancouver Sun, The New York Times, The Sciences, Orion magazine, and frequently on CBC radio and television and National Public Radio. He currently is Academic Director of Simon Fraser University’s Centre for Dialogue, and a Professor of Biological Sciences.

Veselin Jungic is a Senior Lecturer in the Department of Mathematics at Simon Fraser University. Most of his work is within Ramsey theory and the field of mathematics education. In 2012, Veselin was the recipient of the Canadian Mathematical Society Excellence in Teaching Award.

Lisa Papania teaches product development, innovation and business marketing—with a focus on sustainability and creating a circular, community-focused economy—at Simon Fraser University’s Beedie School of Business. She has a PhD from SFU in Canada, and an MBA from Wits Business School in South Africa. Lisa has extensive experience at major multi-national corporations developing products and leading product development teams in environments facing numerous social and sustainability challenges.

Robert Luke is Vice-President of Applied Research and Innovation for George Brown College. He leads the College’s applied research and innovation activities that focus on working with industry to address development needs and productivity challenges. Robert is also responsible for institutional research and planning, focusing on overall educational quality measurement and improvement, and strategy implementation.

William G. Lindsay currently serves as the Director of the Office for Aboriginal Peoples at Simon Fraser University, working out of the Office of the Vice President, Academic. He has also been the editor of two university newsletter/magazines and is the current publisher of the SFU News, Aboriginal Edition. William has worked for many years as an Indigenous teacher, professor, student services provider, and senior administrator, at numerous Lower Mainland colleges and universities.
Jon French is the Director of Marketing & Communications for The Next 36—a national program for the country’s top young innovators, providing them with an unparalleled combination of capital, mentorship, world-class education and in-kind services. Before joining The Next 36, Jon was Associate Director, Career Information with the Institute of Chartered Accountants of Ontario (ICAO). He has been actively involved with the Canadian Association of Career Educators & Employers (CACEE), where he sat on the National Board of Directors from 2007-2010. Most recently, Jon has joined the Venture for Canada Advisory Board.

David Porter is the Project Manager for the Task Force on Flexible Education at Simon Fraser University. He is the former Executive Director of BC campus, where he was a forceful advocate for the use of open pedagogical practices and open educational resources (OER), including the implementation of Canada’s first large-scale, government funded open textbook program in 2012-2014. David is currently involved in the ROER4D research initiative in Mongolia, and is also an adjunct professor in the Master of Educational Technology program at the University of British Columbia.

Jamie Mulholland is a Senior Lecturer in the Department of Mathematics at Simon Fraser University with a background in pure mathematics. He is a published researcher in mathematics education and is highly interested in teaching large classes, use of technology inside and outside the classroom, and developing and teaching online courses that promote mathematics to students at all age levels.

Jaigris Hodson is Director of Social Media at GCI Canada and advisor for Digital Media Zone at Ryerson University. She has presented at multiple conferences and has published articles in a number of journals, including the Canadian Journal of Communication. Jaigris has developed and taught courses in digital innovation and social media at Ryerson University for both the Digital Specialization Program and the Masters in Digital Media Program.
David Leach is the current Director of the Technology & Society Minor Program and an Associate Professor in the Department of Writing at the University of Victoria. He is the former City Life editor at Monday Magazine and managing editor at explore whose award-winning freelance work has appeared in national and international publications. David’s research and teaching interests include how digital technology is transforming the arts, journalism, publishing, and education.

John Gray jumped into the start-up world in early 2009. He is co-founder of Mentionmapp, a visual analytics company. As Launch Academy’s Program Facilitator he’s leading and teaching their Lean Entrepreneur Program. He’s also freelance writer and regular contributor to BetaKit, focusing on keeping the humanity in our conversations about technology. John has a B.Ap.Sc. in Communications and a B.A. in English, both from Simon Fraser University.

Kim Bates is the director of Ryerson’s MBA in management of technology and innovation and the interim director of the MBA global program. She provides academic advice to students and oversees Major Research Paper Projects.

Judy Smith is the Program Director of the Simon Fraser University Community Education Program, a program that supports positive social change through access to education. As part of a dynamic team at SFU, she oversees and participates in the design and implementation of inclusive, community engaged educational projects and programs that help people build socially sustainable communities. These include the Aboriginal Bridge Programs, the Certificate in Dialogue and Civic Engagement, the Restorative Justice Certificate, and a new Nonprofit Management Certificate program launched in Sept. 2015.

Shauna Jones holds a MA in Leadership, teaches Business Communication and Foundations for Working Collaboratively for the Beedie School of Business at Simon Fraser University. Shauna brings with her almost two decades of experience in business and personal consulting, career management, and facilitation and training. She is passionate about working with people to build trust, teams, and leaders. Shauna is also Chair of the Beedie School of Business’ Teaching and Learning Committee. Here she helps develop professional development opportunities for Beedie’s faculty and sessionals.
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