Budget 2014: Re-balancing Innovation Support Programs
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Luncheon Keynote

"The Desire2Learn Story"

John Baker, President & CEO, Desire2Learn

Baker began by referring to an earlier panel discussion about raising capital, which led him to reflect on the fact that he did not look for investors until the company had been in business for more than 12 years. He waited that long because he did not want to be bought and instead wanted to ensure that he was creating a firm of enduring value.

He showed a picture of the house he grew up in, which is in the small Newfoundland town of Wesleyville, as well as his first venture, a Kool Aid stand he ran with his sister. While studying systems design engineering at the University of Waterloo, he was challenged to move from solving given sets of problems to choosing a problem to be solved. He chose to improve the design of crutches, working in a kinesiology lab and eventually winning an engineering award along the way.

The effect of this experience was significant enough for him to skip his final co-op placement and take a summer off to reflect on some ideas that interested him. As he watched technology revolutionizing many existing industries, he saw no parallel revolution taking place in education. So he set out to start one. In seeking to develop a platform that would improve a student's educational experience, he took stock of the many problems that afflict learning systems: retention and attainment rates, maintaining student engagement, improving the efficiency of the learning process, and competing with other educational opportunities around the world. Baker wanted the experts developing new information technologies to be working on problems more significant than getting users to click on an ad.

"We wanted to make learning more personalized, but we also wanted to make it more perceptive," he said. "Instead of a traditional grade book that says 'here's how you did', wouldn't it be better to get a forecast that says 'here's how you're going to do if you keep doing what you're doing.'"

In light of the fact that most people will have several different types of careers during the course of their working lives, the educational system must provide them with the skills to do just that. "It's not just investing in machinery that makes the economy more productive," he said. "Human capital matters. The more that we can invest in our people — sharpening their minds, making them better at whatever they need to be better at — the more we will improve productivity across the country."

Nor are such changes exclusive to business and industry. Arts and culture are likewise evolving with technology, creating global interactions. Similarly, instead of building more bricks-and-mortar institutions to serve just part of a given jurisdiction's student population, he saw the virtue of building a virtual infrastructure that could accommodate the entire population at once. The traditional classrooms still exist, but now the resources available to the students in those classrooms have been dramatically enhanced with information technology.

“Learning can transform a community,” he said, pointing to what he has seen happen in Waterloo. A far more impressive example, he explained, was implemented in Brazil, which adopted a Canadian education model to lift 1,000 women out of poverty and into higher education and into secure jobs. The Brazilian government now has plans to carry out this same strategy for 100,000 women.

Above all, said Baker, Desire2Learn must itself remain innovative, which is why some 40% of its staff are engaged in some kind of R&D. “We are driven by this passion, this relentless focus on constantly keeping ahead of our competitors, constantly being able to stay nimble, working with our clients and partners to continually evolve,” he said, describing how the company’s strategy is written on the wall for everyone to read. “We believe that if we tell people what we want to do, people might actually want to work for us, and we’ll get there faster.”

This strategy begins with challenges, the ways in which the company is confronting those challenges, and “mission metrics”, which includes better student outcomes and retention rates. More specifically, they are looking at a wide range of topics, such as mobile learning, social learning, instructional design, natural language processing, collaboration platforms, and sharing of best practices.

“There’s not much of a gap between what supports learning and what supports research,” he observed. “I’m a big believer that many large companies suffer from just not having a learning culture, where they can take what’s coming out of research and be able to incorporate it into what they do on a day-to-day basis.”

This is especially important when firms launch products or services in a community and obtain immediate feedback from users that can provide invaluable input that must be incorporated as quickly as possible. Internally, it is also a way of learning how to engage employees who are not performing optimally, for example in focused events like hackathons, which bring ideas and solutions forward with breathtaking speed. He has even seen this process demonstrated with low-tech tools, such as tables from IKEA that allow people to write on them with erasable markers.

Baker also related his involvement in Communitech, which helps sustain an entrepreneurial community in the Kitchener-Waterloo region through mentorship, sharing of best practices, and links with educational institutions. In the same vein, as a member of the Governing Council of the Social Sciences and Humanities Research Council of Canada, he has been motivated by that organization’s tag line: “Imaging Canada’s Future”.

“It makes you feel like you’re participating in the development of the future,” he said, a challenge that comes back to him when he reflects on how emerging technologies can be used to benefit communities, especially those smaller communities that are losing people as their local economy wanes. “If the knowledge economy is supposed to replace the old industrial economy,

then how are we going to put the knowledge economy into these smaller communities, if we think these small communities should support that new economy?"

As an example of what this transition looks like in practice, he explained how he purchased and renovated an abandoned hotel in Bayfield, Ontario, transforming it into an office complex for local technology firms. "It started off with two people in the community," he said. "Now it's the largest employer in the town, with almost 30 people working there. And that was done without any assistance."

A questioner asked how on-line education can address the perennial challenge of holding a student's attention. Baker responded that in addition to simply being able to determine if an individual was still participating in this activity, it is possible to analyze that participation to pin down what pedagogical features improve student engagement and outcomes. Some research shows that tools to tailor reminder messages with personal content are more successful at holding student interest, as is regular updating of the information on class Web sites. "But we don't have enough researchers doing this," he said. "We have a plethora of data — petabytes of data — but we're just starting to scratch the surface on the research questions."

Another questioner asked who the customers are for Desire2Learn's products, and what sort of experience the company has had in dealing with unionized teaching systems that resist change. Baker indicated that resistance has not been a major problem, and Canada has emerged as an international leader in this field because of early funding from the National Research Council and elsewhere to support on-line learning. The company currently has about 1,100 clients around the world, most of them in elementary, secondary, and post-secondary educational institutions, but perhaps the most striking opportunity has been in the corporate sector, where learning software is all but unknown. "If companies aren't learning every day from the challenges in front of them, and treating those challenges as learning activities tied to business outcomes, then they're going to fall very fast and very far behind," he said.

Jeffrey Crelinsten asked how the company has been able to grow from a start-up to its current roster of more than 750 employees, and what thresholds or milestones marked that growth. Baker recalled that in the late 1990s, interest in educational technology was minimal. He brought in a collection of friends and relatives to form the business, with little or no revenue, since most of them were volunteers or co-op students. Government funding streams such as IRAP made it possible to keep people around long enough to build up the business and formally hire them. Further to his earlier comments, he consciously avoided VC financing, which he feared would lead to a corporate buy-out, as happened to a rival Canadian firm, WebCT.