Falling enrolment in post-secondary education, higher drop-out rates and reduced engagement in ICT training have combined to create a significant competitive challenge for Canada in a global market. The government of Canada has pointed out that our success depends on integrating technology and digital content into how we live, work and learn.

While Canada can boast of numerous successes in the field of ICT, we are still seeing decreasing interest from Canadian youth in pursuing tech careers. Stéphane Boisvert, the president of Bell Business Markets, notes that since the dot-com collapse the ICT labour force has seen a decline that will affect all businesses, not just technology providers like Bell.

In today’s economy, Boisvert said every sector, from manufacturing to retail and resources, services to government, hinge on technology innovation. Boisvert calls for industry and government to step up and promote a passion for technology in young people.

Technology can also be a powerful solution to shrinking overall enrolment numbers.

Flexible, well-developed distance learning applications mean students who might otherwise have to give up their career dreams in order to support themselves and their families can instead pursue education at a pace that works within their busy lives.

Distance learning, says Anshuman Khare, professor of operations management at Athabasca University, can further develop a workforce that is not only technology literate and skilled, but innovative; one that has global experiences and resources far afield of just Canada. Khare says Canadian students and industry can learn from the international example in areas such as environmental conservation and sustainable technology, to create an innovative workforce that takes ownership of current and future problems facing Canada and the world.

According to Tobi Day-Hamilton, director of advancement at the University of Waterloo Stratford Campus, collaboration between business and academia are at the root of a new breed of learning in which students and researchers are partnering with business to find innovative ways to commercialize digital media. And this is just one example of the exciting ways education is being reinvented.

Together, industry and government can solve the challenges of Information and Communications Technologies skill shortages and use technology as a powerful tool to promote innovation in education and throughout business.

Innovations in education

Technology must play a critical role in both the classrooms and boardrooms of the future
With Dick and Jane busy these days texting and sharing files and videos, they might be excused for sometimes feeling that school doesn’t reflect their lives. After all, our education system has its roots in the Industrial Revolution, when it was designed to teach skills and habits suited to that mechanizing era. This led to rigid scheduling and rows of desks, the emphasis on digesting facts and passing tests.

Today we’re seeing the advent of a more dynamic and flexible learning environment, better suited to how we actually live and learn. Growing numbers of students, including those in remote areas, are leveraging the advantages of distance learning, which is available 24/7 and accommodates any schedule.

Bell has been helping Canadian colleges and universities develop their distance education offerings, using advanced technologies such as cloud-based computing and interactive multimedia, to give their students a higher quality, more flexible learning experience better suited to our times. By reducing travel and the number of classrooms, distance learning is also a “greener” solution, helping to shrink our society’s carbon footprint.

Educating Canadians

Despite these advances, however, technology’s status in Canadian classrooms remains troubling. Ever since the dot-com collapse in 2000, we’ve seen our ICT labour force steadily decline, as young people avoid the technology classroom. This isn’t an issue just for technology companies like Bell. It’s an issue that touches every corner of our nation.

After all, ICT is integral to every sector of our economy—from manufacturing, retail and resources to services and government. If we can’t manage and innovate in ICT, Canada’s global competitiveness will suffer.

And yet we’re experiencing shrinking enrollment not just in technology courses. We’re also seeing high school dropout rates soar across the country—21 per cent higher than the OECD average. According to Statscan, Quebec and Alberta fare the worst, with 24 and 26 per cent of teens, respectively, abandoning school before age 19.

Clearly, industry and government must step up and work together to turn things around. Our national competitiveness is at stake. But so are the lives of many young people who could build satisfying careers in one of the most exciting sectors of society.

As both a supplier to schools and as a corporate citizen, Bell Canada is working to make a difference.

Corporate Canada must step up

Bell’s educational technology solutions can help, but certainly won’t be enough to reverse our nation’s IT skills shortage.

This is where all of corporate Canada needs to step up. We have a responsibility to show Dick and Jane how their passion for the technology tools they use daily can be a springboard for learning and growth.

One positive aspect is that we don’t have to sell youth on technology. It’s part of their lives. They “get it” in ways their parents don’t. Which means we need to connect the dots between their iPhones and their future.

Bell is helping to do that. For example, we’ve been sponsoring elementary and high school science fairs in Quebec for 25 years, attracting 15,000 students annually. The winners’ prizes and prestige help. But more importantly, these events open the eyes of fellow students, often helping to ignite their passion for school and for technology.

We’re also working with other companies to get more kids inter-...
A highly productive future workforce is critical to our future success, but equally important is ensuring an innovative one.

How truly innovative is Canada in the global market? As communications technologies continue to effectively shrink the globe, does Canada have the brand power associated with countries like the U.S. and China?

Canada does have some innovative firms, but we also have begun to lag in innovation. Educators and policy makers need to focus on teaching the technologies that will help shape our future. This includes information and communication technologies that will bring productivity gains, but also other ones in which we can take strong leadership roles, like energy conservation and automotive technologies. We must foster innovation throughout business and education—hand in hand.

But how can we do this?

According to Anshuman Khare, professor of operations management at Athabasca University, we must redefine productivity. Typically productivity is defined exclusively around input and output, but if we want to lead and build innovation it must also include the combating of climate change, as is being driven heavily in Europe and other parts of the world.

To foster innovation, productivity needs to incorporate resource use; for example, manpower, pollution and emissions controls. “Certainly the environment is a current hot-button area that Canadian industry—as a country with great resources—can work to stake out leadership through an educated, innovative workforce,” Khare notes.

As well, just as businesses face global competition, education needs to foster a global perspective. Good, smart ideas have no boundaries, and students can and should learn and seek out good ideas around the world. Current communications technology cuts across those boundaries, bringing the opportunity of a wealth of worldly experience to students.

For example, in the MBA program at Athabasca University, students of Khare’s operations management program have a training team spread all over the world. “Nowhere in the world is inaccessible,” he notes. “This not only brings to the students the mentorship of top talent, but the broader cultural experiences needed to be innovative in a global market.”

Online and distance education not only creates connections between academics and professionals around the world, but can form an active peer-learning environment with the flexibility needed for students to balance the simultaneous demands of work, life and education. Once in a collaborative learning program, like Athabasca’s, expectations are high and demand a level of commitment to sharing knowledge and individual experience from all students. Those who commit themselves gain a more connected interaction with other knowledgeable, motivated students and can focus on applying their learning to their workplaces.

Athabasca’s MBA program is asynchronous; ideas flow back and forth between students and educators, in a classroom like way, facilitated online. Students don’t focus on being ready with answers on the spot, but have time to think, reflect and provide much fuller and more robust responses.

Technology enables this, but education organizations need to proceed with caution around technology. It is easy to become too bleeding-edge, deploying technology because it appears impressive to potential students or educators. Instead, care must be put into developing a learning program first, then supporting it with the technology needed. “The program must drive the technology choices, and not the other way around. Technology exists today that allows education institutions to do almost anything, but without a strategic plan it can quickly become overwhelming, unused or wasted,” notes Khare.

Education and the communications tools that bridge distance play a crucial role in not just building a productive workforce, but an innovative one. Those who innovate, who are the first to identify and solve problems, like Athabasca University has, are able to create the rules of the competitive game, giving them a leg up.
ANNOUNCEMENT

Universal Studios Canada is pleased to announce that James Mallios, MBA, Senior Vice President, Sales has expanded his current portfolio to include Digital Media delivery.

In addition to his role in Home Entertainment, James is now the Canadian representative on the Universal Studios North American Digital Media Team.
Discovering the next digital opportunities are key to Canada’s economic future and will determine our place in an increasingly global economy. With that in mind, the University of Waterloo, through the newly established Stratford Campus, is stimulating invention, collaboration and commercialization through innovative approaches to education and research.

This collaborative, strategic partnership between the City of Stratford and the University of Waterloo brings students, researchers, artists and businesses together to create, examine and commercialize opportunities in the digital media space. Building on the innovation and research strengths of the University of Waterloo and the creative talent of the city, the Stratford Campus will quickly become a digital media powerhouse of activity.

The unique feature of the new campus is the intersection of technology, business and creativity. The programs under development are designed to foster creativity, spark innovation and incubate opportunities by bringing together a cross disciplinary student body with leading business executives and academic researchers. The resulting collaborations will result in the next generation of digital media leaders, technologies, services and creative endeavours.

This September, the campus will begin to change the face of Canadian digital media through an aggressive research and commercialization agenda. Students and researchers will work directly with businesses, government and artists in varying projects in disciplines from the humanities, social sciences, engineering, computer science, environmental studies and business.

“By bringing together academic researchers with business partners,” says Research Director Dr. Jill Tomasson Goodwin, “we will help smaller projects and businesses develop test cases, which can then be partnered with a larger organization to extend the scope of the research questions and the range of business opportunities.”

Accelerating commercialization of digital media technologies is an important feature of the campus. “The opportunities for new company creation in the digital media space in Canada are immense,” says Dr. Paul Doherty, Director Commercialization and Entrepreneurship. The Waterloo Stratford Campus will provide services and space to aid in the incubation of new ventures and digital media start ups.

Last May, the second annual Canada 3.0 Forum was held in Stratford in partnership with the Canadian Digital Media Network. Canada 3.0 brought together more than 2,000 business, government and academic leaders focussed on Canada’s digital future.

“We have to be in a world where we’re about invention and creation,” says Tony Chapman, CEO of Capital C and a Canada 3.0 keynote speaker. “University/business alliances teach students about entrepreneurship and innovation and will prepare students for this future.”

The Waterloo Stratford Campus is building a collaborative environment that accelerates innovation, commercialization and economic prosperity and will drive Canada’s digital future.

Innovation in Stratford
The City of Stratford has an aggressive strategy to be an Intelligent Community. This community of 32,000 is reinventing itself as a wired, digitally savvy community. They’re building a good case:

- The City invested $10 million plus land for the development of the Waterloo Stratford Campus.
- Rhyzome Networks is building a public, citywide high-speed Wi-Fi network overarching its 60 km ring of fibre.
- The Stratford Shakespeare Festival, Canada’s eminent theatrical festival, has developed a robust social and digital media strategy to further engage audiences.
- A brand-new $65 million hospital wing opened, featuring an emergency ward and operating theatres making heavy use of digital media and connectivity.
- RBC is moving its national data centre from downtown Toronto to one of Stratford’s business parks with strengthened digital infrastructure.

For more information visit www.stratfordcampus.uwaterloo.ca
DIGITAL STARTS HERE

Where can you combine technology... AND business... AND creativity?

At the Waterloo Stratford Campus.

Students, professionals and the local community can study digital media through undergraduate and graduate programs, Advanced Professional Development offerings and various lecture series. By harnessing the creativity of the City of Stratford and the entrepreneurial spirit of the University of Waterloo, we’re creating a unique institution that drives digital innovation.

MAKING THE FUTURE IN STRATFORD