How universities can prepare workers for the coming technological tsunami

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The change in the workplace is of such magnitude that many have likened it to a tsunami. At Davos this year, participants will be discussing technology-driven disruptions that are upending the marketplace: Uberization and the sharing economy, blockchain and cryptocurrencies, fintech and artificial intelligence. Equally important, we will also focus, under the theme of "Creating a Shared Future in a Fractured World", on the social disruptions that are creating an uncertain future for many people across the world.

The Global University Leaders Forum, a group that brings together 27 university leaders from around the world, has as one of its main items of discussion the following question: "How can universities be motors of social inclusion in the Fourth Industrial Revolution?"

In Canada, the Advisory Council on Economic Growth, under the leadership of Dominic Barton, has spent a lot of its time focusing on the social policies, education and working structures needed to help our country prepare for the change ahead. This is reflected, in particular, in two of the Council reports: <u>Building a Highly Skilled and Resilient Canadian</u> Workforce through the FutureSkillIs Lab and

Learning Nation: Equipping Canada's Workforce with Skills for the Future.

According to the <u>Brookfield Institute for Innovation and Entrepreneurship</u>, a very large percentage of Canadian jobs are at risk of being redefined, or even eliminated, due to automation. Both blue- and white-collar jobs are in play. Technological shifts are happening so fast, and affecting so many sectors, that a large proportion of the work force can expect major challenges preparing for the new realities of work.

One of the council's recommendations is the creation of a national entity, the FutureSkills Lab, which would catalyze a forward-looking approach to skills development. Another recommendation is the Canada Lifelong Learning Fund, which could provide individuals and employers with incentives for the development of new skills.

For leaders in the higher-education sector, the challenge is to create a learning environment that responds to the need and constraints of workers. One tangible action would be the development of innovative new tools in Canada and across the world that allow working adults to keep learning throughout their careers. Distance learning is not new, of course, but online programs are providing more options for learners to hone both professional and personal requirements. Modular and part-time programs can be completed by taking little if any time off work. "Nanodegrees," focusing on developing targeted, in-demand, high-tech skill sets and cumulative or "stackable" graduate certificates are now part of the learning kits.

Perhaps a more profound change lies in the learning relationship between students and educational institutions that will increasingly need to transcend graduation. The university's imperative to teach people how to learn – for life – has never been more important than it is today.

Ultimately, it will be individuals who need to take control of their own educations in order to shape their career paths and discover new horizons of learning. We are already seeing this "take charge" mindset among students on campuses across Canada. They are involved in research and innovation activities, thus not only feeding their own insatiable curiosity, but developing skills and leadership capacity. They are choosing to take a course or two online in order to free up their schedules so that they can participate in an experiential or action-based learning opportunity, thus seeing how they can apply their knowledge and skills in the workplace.

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They know that their education will never stop – and it excites them. In fact, it should excite all of us.