



Speaking Notes: Finance Committee – Youth Employment Study

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Thank you for inviting me to address this Committee. I appreciate the opportunity to speak with you about how we can prepare Canadian youth for employment in a rapidly changing environment. As the President of Let's Talk Science, I have spent the past two decades working to help Canadian youth prepare for new work and citizenship demands so they are able to thrive in this country, enjoy a high quality of life and contribute as engaged citizens.

Let's Talk Science is a national charitable organization that engages youth across the full developmental continuum – from preschool to post-secondary and graduate studies. We help them develop critical skills, competencies and attitudes that are increasingly needed in a knowledge-based economy by engaging them in meaningful learning experiences in science, technology, engineering and math or “STEM”. Every year we also work with 40 universities and colleges to deploy more than 3,000 volunteers – the average age of which is early 20's. Let's Talk Science also works with thousands of educators with the goal that they have the support and resources they need to support their students.

I am here today to share 4 points about youth employment. Before I talk about each point I want to underscore that we need to do a better job helping youth understand and develop the evolving skills that are needed for employment and we need to start the process earlier. When I talk about “STEM”, it includes science, technology, engineering and math. When I talk about “STEM skills”, I am including those skills that are developed through engagement in STEM such as problem solving, critical thinking, information management, working in teams etc. STEM engagement builds critical process skills not just content knowledge.

1. **STEM underpins 21st century employment opportunities.** Over the past few years, Let's Talk Science has produced several reports, with funding from Amgen Canada, that examine current and projected employment opportunities and their connection with STEM engagement. We've found that an increasing proportion of jobs require STEM skills and knowledge regardless of the postsecondary pathway – university, college and skilled trades. In fact, our estimates indicate that 70% or more of jobs need STEM. And those are the jobs we know about now. STEM skills are needed by engineers and engineering technicians, health care workers, electricians, farmers and heavy equipment operators. I could go on. Science can no longer be equated only with research laboratories. Science should – even must – be equated with jobs.

Yet, despite this growing demand for STEM talent, fewer than half of Canadian students leave high school with the STEM courses needed for postsecondary pursuits that lead to in-demand jobs. Fewer than 20% of high school student graduate with Grade 12 physics. Yet, a recent meeting I had with college faculty clarified that advanced physics and calculus is needed for their automotive program.

STEM engagement prepares people for high demand occupations. It also prepares people for lower skill jobs, which don't look like they did a generation ago because of technology transformation. Unfortunately, most young people don't realize how many doors science can open so they drop it – especially chemistry and physics.

We need to do more to promote the value of STEM engagement for all jobs – all employment opportunities. Too many young people are leaving high school having closed many doors simply because they don't complete the programs they need. They need better, more timely, and more relevant career connections.

There is a role for the federal government while respecting jurisdictional responsibility for education. By working with Let's Talk Science we can tackle the issue in new ways across Canada. We are working with youth, teachers, colleges, universities, industry, Aboriginal communities, other nonprofits, and with governments to offer relevant programs with a goal of ensuring that Canadian kids are ready for Canadian jobs.

- 2. Volunteer opportunities build important employability skills.** Let's Talk Science relies on the leadership and volunteerism of post-secondary students who work with children and youth in schools and communities in all regions of Canada. During the last month, one team of volunteers was in Arviat, Nunavut where they engaged all the kids in the region. Another team recently offered a day for high school students to explore nanoscience in Edmonton. At every site, student coordinators are in place to manage all aspects of the day to day operations. Please note that our coordinators are students also. To support the program, we have approximately 100 coordinators in place and we work closely with them and their 3,000 volunteers. Our research shows that Let's Talk Science volunteers and coordinators develop leadership skills, management skills, communication skills, and more. Plus over three quarters have reported that volunteering with Let's Talk Science made them realize how they can make a positive difference to their community. Many have reported informally that volunteering with Let's Talk Science prepared them most for employment. We would like to be in a position to strengthen our training opportunities, offer formal recognition for their skills achievement and to link our volunteers with employment opportunities more directly.
- 3. Talent development starts in the sandbox.** This demands a long-term vision that is implemented with patience and consistency. Too often we start discussions about employment and jobs much too late- when we actually want people to BE employed. While each of us might ask children what they want to be when they grow up, the discussion usually ends there and is picked up again far too late. In fact our own surveys suggest that only about 20% parents talk with their kids seriously about career planning and the role of STEM engagement as preparation. We need to spark a cultural revolution that showcases the new skills and attitudes Canadians need for value add jobs in a knowledge based economy.

Let's Talk Science starts in the sandbox with programs for child care centres and we work with early years educators and primary teachers. Once that interest is sparked early on, we must nurture it throughout all ages. And we need to make better connections to jobs all along the way. The effort won't be wasted since jobs in every field benefit from analytical, curious, critical thinkers.

- 4. My fourth and final point is that Canada is the only developed country without a national education ministry or federal secretary of state for learning.** No formal vehicle exists to regularly convene all stakeholders or drive a national vision. I spoke earlier about Let's Talk Science's attempts to fill that void for STEM learning. We work formally with many ministries of education, teachers' associations, and many other partners, but for large scale success, the effort needs to be scaled to a national level. In countries that do implement a national vision we see incredible growth. For example, in Canada, the proportion of students who pursue undergraduate STEM programs at university has remained stable at around 20-25% while in China, the proportion now exceeds 50%.

In conclusion, STEM engagement matters for 21st century jobs. We need to ensure that Canadian youth are prepared. We need to start early and we need a strong national effort. If we don't, our youth will not be prepared for the value-add, knowledge-based jobs that Canada needs. The highest demand jobs in a creative economy require people with the skills and knowledge that are developed by STEM engagement. Many jobs that are perceived to require low skills have been transformed and also require STEM capability. All jobs benefit from people who are analytical and curious – the very qualities that drive innovation.

Let's Talk Science is here to help; we are committed to taking the successes we've achieved to the next level for Canada's future. After all, it takes a country to raise a child. Thank you.