

Raise Those Marks: Roadmap for a Canadian Innovation Nation



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AS STUDENTS ACROSS THE COUNTRY brace themselves for final exams, Canada is facing up to some uneven national marks. On the surface, Canada's performance is respectable. We ranked #10 in the 2010 World Economic Forum (WEF) Global Competitiveness Report and #7 in the 2010 IMD World Competitiveness Scoreboard. But a deeper look reveals

that Canada is being out-paced. Like the family gathered around the kitchen table to discuss grades, let's take this opportunity to reflect, refocus and recommit to the goal of excellence through education and innovation.

The electronic mobility of the knowledge revolution is redrawing the map of global influence. Today, any nation of reasonable economic means can play on the world stage to remarkable local benefit – so long as it possesses the ambition, the vision and the commitment to harness the talents of its citizens, and to build a knowledge-and-innovation-based economy. While this worldwide progress is most welcome, it serves as a wake-up call to more established nations. At a time when other countries are racing ahead, Canada can ill-afford complacency and resulting stagnation.

So what can we do to build an innovative, knowledge-based society that will hold its own in the new world order, bringing a stable econo-

my and sustained health and well-being to our citizens? I have four recommendations:

#4: Raise university graduation rates to at least 45 per cent. The Canadian university graduation rate in 2007 was 34 per cent, which places us 18th out of 24 countries tracked by the Organisation for Economic Co-operation and Development (OECD). Our trends in education, and especially our numbers of PhD graduates – often the very people who most drive innovation – are particularly troubling. The average university graduation rate for OECD member countries nearly doubled between 1995 and 2007, a 195 per cent increase, while Canadian rates grew by only 26 per cent. The aggressive progress of educational success in “emerging” economies is also particularly striking; in China, for example, the number of graduates from universities and specialized colleges has grown by almost 400 per cent in less than a decade. Canada must do better.

#3: Re-think intellectual property practices. Rather than continuing the time-intensive tradition of closed IP – patents, licenses, contracts and associated streamed income – we should focus on opening the flows of information across universities, government research labs and business. A new approach to IP can be created, protecting student contributions and the right of professors to publish, while accelerating the number and productivity of the rich, targeted mutual partnerships that Canada needs to increase competitiveness and grow quality of life. Open IP needn't prevent universities from profiting from runaway successes, either (such as Université de Sherbrooke's contribution to the VoiceAge audio compression technology that is used by millions of cellphone users worldwide every day); a standard “wind-fall” clause in university-industry research agreements could exist to kick in if, and only if, an invention becomes highly profitable.

#2: Connect clusters of innova-

tion. Canada already boasts many productive clusters of talent, investment and innovation. Let's leverage their power strategically by creating large-scale, international and inter-sectoral collaborations, in targeted areas of strength and importance, between industry, universities and colleges, NGOs and government agencies.

#1: Reinvest in research. Canada must reinvest in research – basic as well as applied – across disciplinary domains. The humanities and social sciences, the physical and life sciences, and engineering – all make major contributions to Canada's innovation capacity. Of the nine countries ahead of us in the WEF ranking, all but the Netherlands spend a greater proportion of their GDP on research and development – a key measure of innovation and a predictor of future success. Although Canada's federal investments in university research grew by an average of 11 per cent annually, from 1997 to 2007, the country's overall R&D spending as a proportion of GDP has

grown only marginally since 1995 – while in countries like Singapore (1st IMD, 3rd WEF) it has more than doubled. The last decade has seen dramatic advances in Canada's capacity to recruit and retain outstanding talent, but our progress is threatened by a shortage of effective, sustained and predictable research funding that is competitively allotted. This kind of investment may take time to bear fruit, but medium- and long-term vision is of the utmost importance. Funding sports arenas and casinos at the cost of research does not serve our society well.

If this sounds worried or pessimistic, don't be fooled. I have enormous confidence in the capacity of our nation to do what we do best: to succeed on the basis of our strong communal values and our openness, engaging with the world and welcoming it in. Embracing education and innovation as our top provincial and national priorities will be the best way to do so, as we enter the second decade of this new millennium.