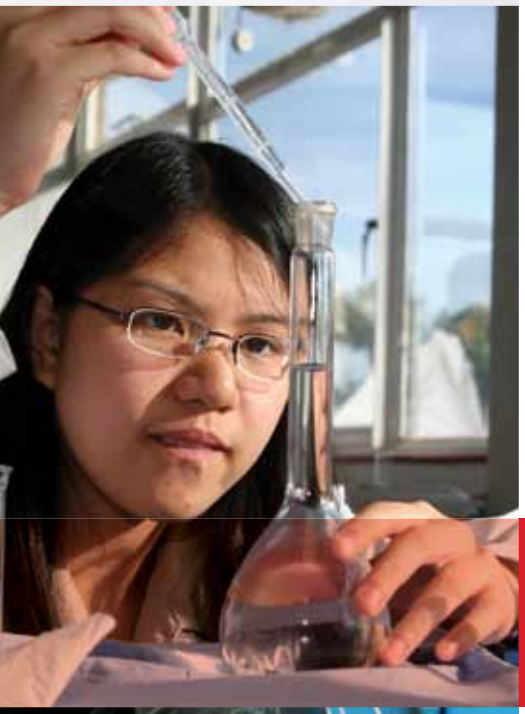

Driving Canada's Long-term Prosperity

ADVANCED SKILLS & INCREMENTAL INNOVATION

AUGUST 2011

Submission to the House of Commons
Standing Committee on Finance
2012-2013 Pre-Budget Consultations

Association of Canadian Community Colleges

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The Association of Canadian Community Colleges (ACCC) is the national and international voice of Canada's 150 publicly-funded colleges and institutes. With campuses in 1,000 urban, rural and remote communities, these institutions educate learners of all ages and from all socio-economic quarters. They partner with small- and medium-sized enterprises (SMEs) to share expertise in applied research and innovation.

Colleges are the advanced skills educators of choice. Aligned with the needs of employers, and operating on the leading edge of skills identification, economic trends, and market shifts, colleges solicit business and industry input into curriculum development through Program Advisory Committees. They support business growth and sustainability by supplying graduates with advanced skills, re-skilling displaced employees, offering customized education, and providing applied research and development support. They increase the access of the disadvantaged to post-secondary education and facilitate credential recognition for immigrants.

Member colleges and institutes are identified on the back cover.

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AUGUST 2011

Submission to the House of Commons Standing Committee on Finance
2012-2013 Pre-Budget Consultations

Driving Canada's Long-term Prosperity – Advanced Skills and Incremental Innovation

Advanced Skills Action Plan for Canada

Employers are again sounding the alarm about advanced skills shortages. The economic downturn temporarily alleviated the pressure, but employers now report renewed challenges recruiting personnel with the advanced skills needed for productivity and growth.

Canada's dual challenge of "*Jobs without People, People without Jobs*" puts the country at risk. Owing to the knowledge economy and the increasing technological complexity of the workplace, 70 percent of new jobs now require post-secondary credentials. Despite high unemployment, employers too often are not able to find people with the required qualifications.

Compounding the problem is our rapidly aging population. In a generation, Canada's labour participation rate will decline from 64 to 44 percent, even after accounting for immigration.

"*This is not a battle that any of us can afford to lose*," as Perrin Beatty, President and CEO of the Canadian Chamber of Commerce has put it.[1]

" This is not a battle that any of us can afford to lose."

Perrin Beatty, President and CEO of the Canadian Chamber of Commerce

The mining industry must hire 100,000 people by 2020 and 150,000 construction specialists will retire by 2015.[2] Welders are urgently needed in British Columbia Nurses and other healthcare professionals are in short supply everywhere. The retail and hospitality industries are deeply concerned.

Within ten years, 1.5 million positions will be vacant unless more mitigating measures are implemented soon.

The Canadian Federation of Independent Business reports that one third of small- and medium-sized enterprises (SMEs) identify the shortage of skilled labour as the top business constraint.[3] ManpowerGroup reports that 29 percent of companies had difficulties filling jobs in 2011, up from 21 percent in 2010.[4]

Colleges and institutes produce the graduates with advanced skills required by employers. They upgrade the skills of current employees and the unemployed, and provide access to post-secondary education to under-represented groups, in particular Aboriginal people, immigrants and persons with disabilities. They are the primary education providers for seven of the 10 hardest jobs to fill identified by Canadian employers in a recent survey: skilled tradespersons, sales representatives, technicians, drivers, machinists/machine operators, mechanics and accounting and finance staff.[5]

The Government of Canada has implemented several measures to mitigate the problem including reformed immigration policies, essential skills training, tax credits, apprenticeship incentive grants and a new partnership with the Assembly of First Nations to improve K-12 education.

1 CBC News July 6, 2011.

2 *Trend Analysis on Human Resource Intelligence.* The Alliance of Sector Councils. January – May 2011.

3 *Business Barometer – May 2011 Results of SME Business Outlook Survey.* Canadian Federation of Independent Business. June, 1, 2011.

4 *Talent Shortage 2011 Survey Results.* ManpowerGroup. ManpowerGroup surveyed nearly 40,000 employers across 39 countries during the first quarter of 2011, including 1,900 employers in Canada.

5 Ibid.

However, the magnitude of the challenge requires a holistic – even global – approach. This is the direction recommended by the Organisation for Economic Co-operation and Development (OECD) which calls for a global skills strategy that includes increased investment in education and skills development and a cross-government approach to share effective policies.

> While the need for fiscal consolidation in the wake of the crisis is putting pressure on all elements of public expenditure, including education and training, this is precisely the time when investment in skills is most necessary to boost economic growth and facilitate the (re) integration of individuals into the labour market.[6]
> - OECD 2011

In order to remain competitive, Canada must invest significantly in post-secondary education (PSE) and develop an action plan to increase the number of persons with advanced skills.

A cross-government and multi-stakeholder advanced skills action plan for Canada is required. A national dialogue involving provincial/territorial governments, educational institutions, the private sector and civil society is the first step. The objective would be to identify policies and approaches for increasing participation in PSE, making pathways to higher education more efficient, improving Aboriginal education outcomes, and enhancing the educational achievement of other traditionally marginalized populations.

The Canada Social Transfer – Increased and Targeted Investments in Post-Secondary Education

Notwithstanding the strong demand for college graduates, long waitlists for many programs in high demand occupations prevent tens of thousands of qualified students from pursuing their chosen career. As a result, businesses do not expand and tax revenues are compromised. The college system requires a sustainable financial foundation.

The expiry of the CST in 2014 provides an opportunity for the separation of the PSE component into a Canada Post-Secondary Transfer.

In 2008-09, the Government of Canada recognized the advanced skills shortage by committing an additional $800 million to the CST for PSE and legislating a three percent annual increase until the end of 2013-14. The PSE portion of the transfer was $3.5 billion in 2011-12 and will increase to $3.8 billion by 2013-14. The allocation of targeted PSE funding within the CST was initially seen as a measure towards increased transparency. Unfortunately, it is not possible to determine if these funds are used for their intended purpose. The expiry of the CST in 2014 provides an opportunity for the separation of the PSE component into a Canada Post-Secondary Transfer with accountability requirements similar to those agreed to with the provinces and territories for the Health Accord. A separate Social Transfer must continue to invest in adult basic education for social assistance recipients.

Recommendation:
Establish a separate Post-Secondary Education Transfer starting at $3.8 billion in 2014 and increasing by a minimum of three percent per year.

6 *Towards an OECD Skills Strategy*. OECD 2011.

Increasing Productivity through Incremental Innovation

Federal science and technology investments are overwhelmingly directed to pure or discovery research, with modest support for applied research and development. While investments in pure research *may* contribute to the economy in the long-term, Canada's single-minded support for exploration at the periphery of knowledge has over-shadowed the "here and now". The practical side of business innovation and continuous improvement, the very root of productivity, has been neglected. We commend the Government of Canada for appointing an independent expert panel to provide recommendations on how to maximize the $7 billion dollars spent annually to encourage business R&D.

The Science, Technology and Innovation Council's second report - *State of the Nation 2010: Imagination to Innovation* - claims that Canada's main challenges are to increase private sector investment in innovation and to improve Canada's capacity to transfer research into the marketplace. Remarkably, the report over-looks the role of colleges and institutes in applied research in partnership with local companies, particularly SMEs which are the source of most new jobs. In 2010-11, 4,419 companies, primarily SMEs, partnered with colleges on applied research projects. This is an increase of 16 percent from 2009-10. While the Government of Canada has made initial investments in this capacity, the potential remains largely untapped.

Canada's colleges and institutes are integrated with the industrial and technical drivers of the economy and are natural catalysts of incremental innovation. Colleges and institutes help SMEs develop and grow by focusing on improvements to existing technologies, processes, products and services to enhance competitiveness. These improvements are often delivered in small steps which, over time, add up to significant changes which maintain and expand market share.

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College graduates play a critical role in incremental innovation. OECD data indicate that a key part of the production workforce is trade and technician occupations. Their education and employment involves the generation, design, installation, adaptation and diffusion of new and existing technologies.[7] In 2010-11, 13,510 college students were engaged in research, 62 percent more than reported in 2009-10. Unfortunately, college students are not eligible for funding under federal granting council programs such as the Natural Sciences and Engineering Research Council (NSERC) Industrial Undergraduate Awards. Our private sector partners tell us that the quality of applied research projects undertaken by college students is equal or superior to research projects undertaken by university undergraduates. Internships for college students are needed to provide industry-relevant research experience that complements their learning and helps businesses innovate.

The Government of Canada has made important investments through the College and Community Innovation (CCI) Program administered by NSERC, the Federal Economic Development Agency for Southern Ontario – Applied Research Commercialization Initiative, and the Canada Foundation for Innovation College – Industry Innovation Fund. We commend the 2011 Budget commitments for 30 new Industrial Research Chairs at colleges, joint college-university commercialization projects and college-SME partnerships to accelerate the adoption of information and communications technologies.

7 Toner, P. *Workforce Skills and Innovation: An Overview of Major Themes in the Literature*. OECD Directorate for Science, Technology and Industry. 2011. pg. 27.

The doubling of the CCI Program from $15 million to $30 million in 2010-2011 is supporting collaborative activities with SMEs and strengthening their competitiveness through innovation. The CCI Technology Access Centres Grants is a pilot program that will allow five centres to be established to support business innovation and commercialization. More technology access centres across the country would improve national innovation commercialization outcomes.

We have only begun to recognize the power of college-SME partnerships in applied research.

We have only begun to recognize the power of college-SME partnerships in applied research. Stimulating innovation in Canada's SME sector will do more than any other measure to improve productivity and create jobs.

Current federal research policy and funding must be re-focused to encourage incremental innovation. A 2011 OECD paper on workforce skills and innovation advocates incremental innovation as the principal source of productivity growth in economies.

> …while not diminishing the importance of breakthrough innovation or of local discovery, the majority of innovation is incremental, involving improvement in products, processes, methods and so on… Hence broadly distributed capabilities are vital and investment in human resources is the essential foundation for innovation.[8]

Federal allocations for college applied research have made a difference but represent just 1.25 percent of the $2.9 billion of federal research funding allocated annually for the higher education sector. Further federal investment in applied research at colleges and institutes would substantially increase the capacity of SMEs to raise productivity through innovation.

Recommendation:
Allocate five percent of federal investment in research and development to applied research partnerships between colleges and small- and medium-sized enterprises.

Improving Aboriginal Education Outcomes – A Social and Economic Imperative

Over the next decade, 400,000 Aboriginal young people will reach working age, affording an opportunity for Canada to improve the economic success and well-being of this marginalized population.[9]

The benefits will be great. The Centre for the Study of Living Standards reports that increasing educational and employment outcomes of Aboriginal people to non-Aboriginal levels would lead to the following results in 2026: a $36.5 billion increase in GDP; government tax revenue increasing by $3.5 billion; and government expenditures declining by $14.2 billion.[10]

8 Ibid.
9 *Federal Framework for Aboriginal Economic Development.* Government of Canada. 2009.
10 *The Effect of Increasing Aboriginal Educational Attainment on the Labour Force, Output and the Fiscal Balance.* Centre for the Study of Living Standards. May 2009. pg. v.

The Canada-First Nations Joint Action Plan by the Assembly of First Nations and Aboriginal Affairs and Northern Development Canada, and the National Strategy on Inuit Education 2011 are powerful documents. Given the dire situation of First Nations schools and the low secondary school completion rates of First Nations and Inuit youth, there is an urgent need to improve K-12 systems and outcomes. These investments must be balanced with investments in post-secondary education and adult basic education.

First Nations and Inuit students are supported through Aboriginal Affairs and Northern Development Canada's Post-secondary Student Support Program (PSSSP). The 2011 report of the Auditor General of Canada indicates that the PSSSP does not provide eligible students with equitable access to PSE funding.[11] The Assembly of First Nations estimates that, as a result of the two percent cap on the program, 13,802 eligible students did not receive financial support.[12]

Non-Status and Métis people, and many First Nations people living off reserve, also face financial barriers. The Urban Aboriginal Peoples Survey conducted by the Environics Institute found that lack of funding was the number one barrier to participation in post-secondary education.[13]

We applaud the Budget 2011 commitment to expand northern territorial colleges' adult basic education programs. The need for adult basic education cannot be underestimated. The 2006 Census reported that 44 percent of the Aboriginal population over the age of 15 (360,000 people) did not have a high school diploma. For First Nations people on reserve and the Inuit, the percentages were unacceptable at 59 and 75 respectively. Adult basic education programs are key to enabling this pool of Aboriginal learners to make the transition to PSE and employment.

Increasing educational and employment outcomes of Aboriginal people to non-Aboriginal levels would lead to a $36.5 billion increase in GDP in 2026.

Recommendation:
Commit to raising the educational attainment rates of First Nations, Inuit and Métis people to national averages.

11 *2011 Status Report of the Auditor General of Canada to the House of Commons, Chapter 4 Programs for First Nations on Reserves.* Pg.14.
12 *Assembly of First Nations – National Chief's Virtual Summit on Post-Secondary Education.* January 2011.
13 Urban Aboriginal Peoples Survey, Environics Institute: http://uaps.ca/knowledge/key-findings/

ACCC Member Colleges and Institutes

British Columbia
Camosun College
Capilano University
Douglas College
Justice Institute of British Columbia
Kwantlen Polytechnic University
Langara College
College of New Caledonia
Nicola Valley Institute of Technology
North Island College
Northern Lights College
Northwest Community College
Okanagan College
College of the Rockies
Selkirk College
University of the Fraser Valley
Vancouver Community College (VCC)
Vancouver Island University

Yukon
Yukon College

Alberta
Bow Valley College
Grande Prairie Regional College
Grant MacEwan University
Keyano College
Lakeland College
Lethbridge College
Medicine Hat College
NorQuest College
Northern Alberta Institute of Technology (NAIT)
Northern Lakes College
Olds College
Portage College
Red Deer College

Northwest Territories
Aurora College

Manitoba
Assiniboine Community College
University College of the North
Red River College of Applied Arts, Science and Technology
École technique et professionnelle, Collège universitaire de Saint-Boniface
Winnipeg Technical College

Nunavut
Nunavut Arctic College

Saskatchewan
Carlton Trail Regional College
Cumberland Regional College
Great Plains College
North West Regional College
Northlands College
Parkland College
Saskatchewan Indian Institute of Technologies (SIIT)
Saskatchewan Institute of Applied Science and Technology (SIAST)
Southeast Regional College

Ontario
Algonquin College
Collège Boréal
Cambrian College
Canadore College
Centennial College
La Cité collégiale
Conestoga College Institute of Technology and Advanced Learning
Confederation College
Durham College
Fanshawe College
Fleming College
George Brown College
Georgian College
Humber College Institute of Technology and Advanced Learning
Lambton College
Loyalist College
The Michener Institute for Applied Health Sciences
Mohawk College
Niagara College
Northern College
St. Clair College
St. Lawrence College
Sault College
Seneca College
Sheridan College Institute of Technology and Advanced Learning
University of Guelph, Kemptville Campus
Université de Guelph, Campus d'Alfred

Quebec
Cégep de l'Abitibi-Témiscamingue
Collège Ahuntsic
Cégep André-Laurendeau
Cégep Beauce-Appalaches
Cégep de Baie-Comeau
Champlain Regional College
Cégep de Chicoutimi
Dawson College
Collège Édouard-Montpetit
Collège François-Xavier-Garneau
Cégep de la Gaspésie et des Îles
Collège Gérald-Godin
Heritage College
Institut de technologie agroalimentaire
Cégep John Abbott College
Cégep de Jonquière
Cégep de La Pocatière
Collège Laflèche
Cégep Limoilou
Collège Lionel-Groulx
Collège de Maisonneuve
Marianopolis College
Cégep Marie-Victorin
Cégep de Matane
Collège Montmorency
Cégep de l'Outaouais
Cégep régional de Lanaudière
Collège de Rosemont
Cégep de Sainte-Foy
Cégep de Saint-Félicien
Cégep de Saint-Hyacinthe
Cégep Saint-Jean-sur-Richelieu
Cégep de Saint-Jérôme
Cégep de Saint-Laurent
Cégep de Sept-Îles
Collège Shawinigan
Cégep de Sherbrooke
Cégep de Trois-Rivières
Vanier College
Cégep de Victoriaville
Cégep du Vieux-Montréal

New Brunswick
New Brunswick College of Craft and Design
New Brunswick Community College (NBCC)
Collège Communautaire du Nouveau-Brunswick (CCNB)

Newfoundland and Labrador
College of the North Atlantic (CNA)
Marine Institute
Centre for Nursing Studies

Nova Scotia
Université Sainte-Anne - Collège de l'Acadie
Canadian Coast Guard College
Nova Scotia Agricultural College (NSAC)
Nova Scotia Community College (NSCC)
Cape Breton University

Prince Edward Island
Holland College
Collège Acadie Î.-P.-É.