



Colleges and Institutes Canada
Collèges et instituts Canada



Lessons Learned from the Canadian Experience to Support Asia's Development

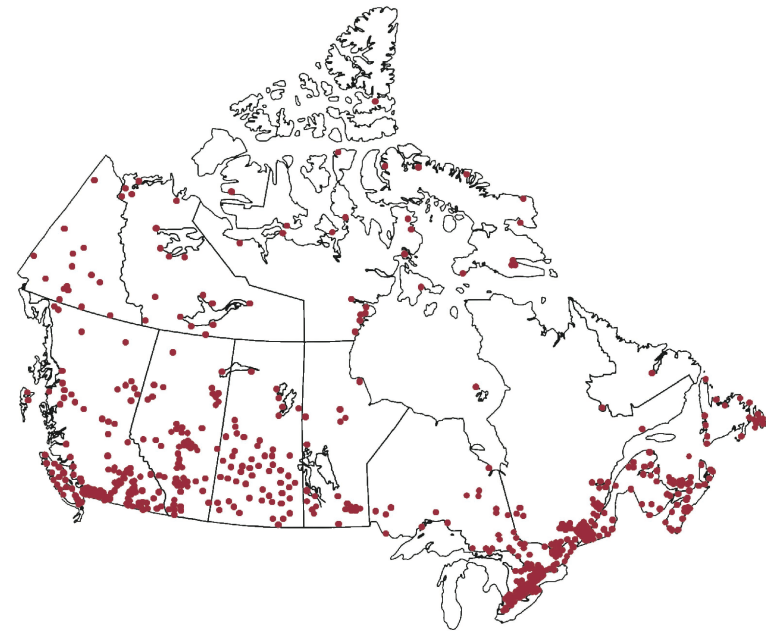
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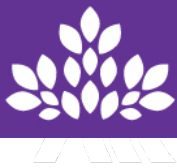
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About Colleges and Institutes Canada

- 130 public post-secondary institutions of applied learning
- Community colleges, university college institutes of technology, polytechnics, specialized institutes of health, agriculture, etc.
- In over 3,000 communities serving 1.5 learners
- Multicultural and open to the world
- Promoting Access, Advanced Skills for Employment, Applied Research and Innovation





Uniqueness of the Canadian Model

- Accessible to all who want to learn
- Applied Education
- Strong Links with Industry
- Entrepreneurial culture
- Applied Research
 - College Centres for the Transfer of Technologies (CCTTs)
 - Technology Access Centres (TACs)
- Key performance indicators (public)



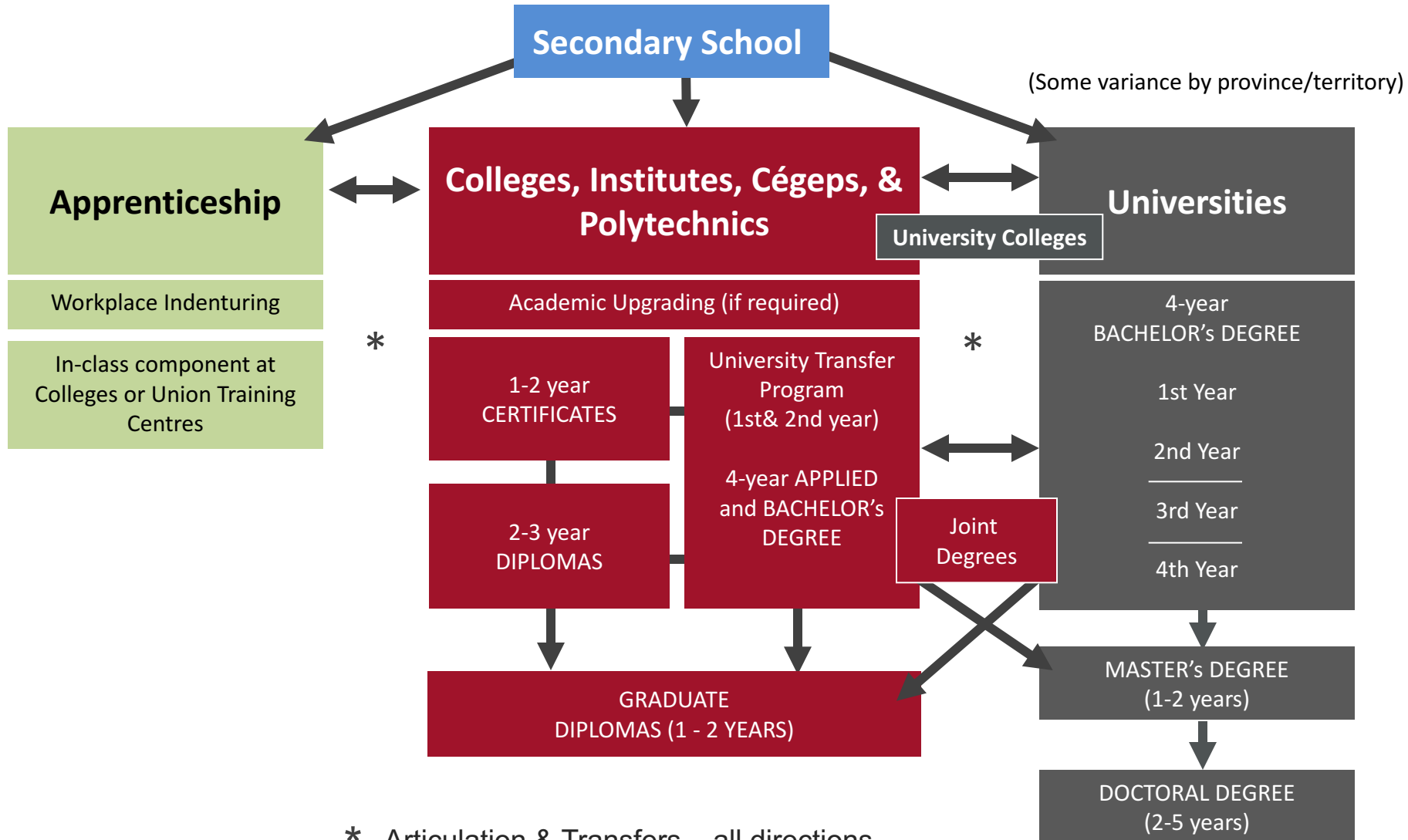


The College/Institute Model: Strong Partnerships with Employers





Canadian Educational Structure





CICan around the world



Services to International Partners

- Access to Canadian institutions to share experience and expertise
- Capacity building and strengthening of education systems, teacher training, curriculum development, quality assurance
- Support and linkages in a variety of sectors
- Expertise in applied research



Our Programs around the world

Caribbean

Belize, Guyana, St. Lucia,
Suriname, Trinidad & Tobago,
Antigua & Barbuda,
Dominicaba, Grenada, Jamaica,
St Kitts & Nevis, St, Vincent &
the Grenadines

South America

Bolivia, Chile,
Colombia, Mexico,
Peru and Brazil

Africa

Kenya, Mozambique,
Senegal, Tanzania

Asia

China, India, Vietnam

International CIGan offices in Bolivia, Colombia, Chile, Peru, Senegal, Kenya, Tanzania, Mozambique, India, China and the Philippines



Education For Employment Approach

- Improving socio-economic **well being of vulnerable youths** in rural and peri-urban areas
- **Training for employment** in growing economies
- Strengthening capacity of TVET institutions to **attract, train and graduate citizens with relevant skills**

Sectors (some examples):

- Agriculture
- Energy and resource extraction
- Information and Communication Technology (ICT)
- Industrial mechanics



Program Components

- Marketing of TVET
- Instructor Training
- Leadership Institute
- Development of Career Guidance materials
- Strategies for linkages with employers
- Entrepreneurship
- Labour Market Information
- Essential Employability Skills
- Gender
- Environment



*Based on institutional partnerships
for sustainability*



Our Experience in Asia

Tra Vinh College

- **Poverty reduction** through increasing access to technical/vocational education to disadvantaged groups
- Training **aligned with** the needs of the **private sector** of Tra Vinh region

China VELT & PATHPRO programs

- Leadership development for **Presidents of Chinese institutes of technology**



Indonesia

- Overseas training programs in **Applied Research** for Polytechnic staff
- Focus on tourism, mining, manufacturing, agri-industry, and infrastructure
- Support to **establish Centres of Technology (COT)** in Polytechnics
- Study visits for senior government officials and management personnel



Hunan Management Capacity Building

- Partnership to build strong **management capacity building** activities at a senior management level



Lessons Learned

- Growth path for Asian countries requires **move from a low-technology and skills model to a higher technology** skills model
- Need to **upgrade skills development systems**
- Economic backdrop against which Canadian college system evolved similar to current Asia context - Canadian **colleges filled the gap** by changing the skills development landscape
- Accomplished by forming **close relationships with local communities and industry.**





Implications for skills development in Asia

- Making **post-secondary education** more **accessible**
- Focusing on **serving the economic and social needs of communities**
- Better **aligning TVET with national objectives** but with autonomy to respond to the skill requirements of industry
- **Involving employers** in program development
- **Challenging view** that universities are primary providers of essential skills and vocational institutions the provider of technical and job-specific skills
- **Updating curricula** and using modern teaching methods
- Teaching **critical thinking** and **entrepreneurship**





Expertise of Canada's Colleges and Institutes relevant for Asia

Agriculture

- Agriculture and Aquaculture
- Food Services
- Food Preparation and Distribution



Extractives

- Oil and Gas Regulations
- Forest Technology/Forestry
- Urban Forestry
- Mining Engineering



Environment

- Environmental Technology
- Environmental Technician
- Environmental Engineering
- Environmental Management



Water

- Water and Wastewater Technician
- Water Quality
- Water Engineering
- Land and Water Management
- Water Conservation and Management





Agri-Food Sector

Applied Research and Innovation

There are currently over **55 applied research projects** related to the agri-food sector in colleges and institutes across the country. All are conducted in collaboration with local businesses and employers, the majority being small or medium-sized enterprises. Examples include:



Douglas College (BC), in collaboration with Applied Bio-nomics Ltd. helped test new biological pest control methods adapted to the needs of BC's blueberry producers.



Saskatchewan Polytechnic (SK) worked with Saskatoon's Great Western Brewing Company (GWBC) to develop a genetic profile of the firm's yeast culture to ensure the continuity of its beer brands.



Niagara College – Ontario

Precision Agriculture Automatic, or PragMatic, is an integrated system being developed by Dr. Michael Duncan and a research team at Niagara College that collects and synthesizes relevant farm data from GPS and sensor-enabled combines and spreaders and provide useful and timely information for the grower.

<http://www.chch.com/farming-technology/>



Agri-Food Sector

University of the Fraser Valley





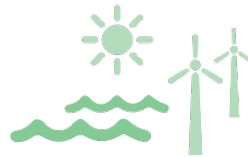
Natural Resources and Clean Technologies Sector

Applied Research and Innovation

Over **100** college-based research centres and laboratories are dedicated to the natural resources and clean technologies sector across the country. This includes centres such as:



The *Centre for Alternative Wastewater Treatment* at **Fleming College (ON)** is an internationally recognized research institute that works with industry partners on emerging concepts to develop real world applications, and aims to turn innovative ideas into market advantage for a cleaner world.



The *Industrial Research Chair for Colleges in Sustainable Energy Technology and Energy Efficiency (TERRE)* at the **Cégep de Jonquière (QC)** carries out applied research in sustainable supply to help isolated areas free themselves of their dependency on fossil fuels.



Skills and Innovation in the Natural Resources and Clean Technologies Sector

Yukon College



Treating Mine Tailing Effluents in Northern Wetlands

Cégep de l'Abitibi-Témiscamingue

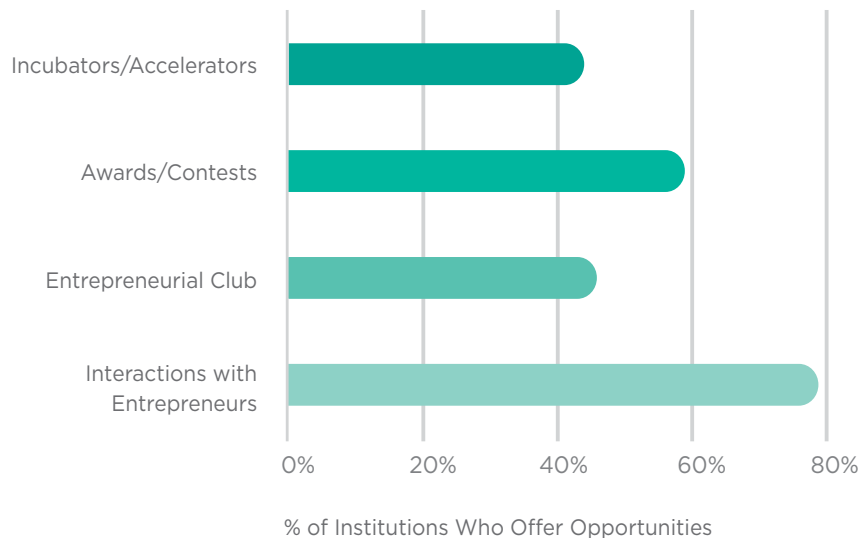


Rye-vegetation of Contaminated Mining Sites

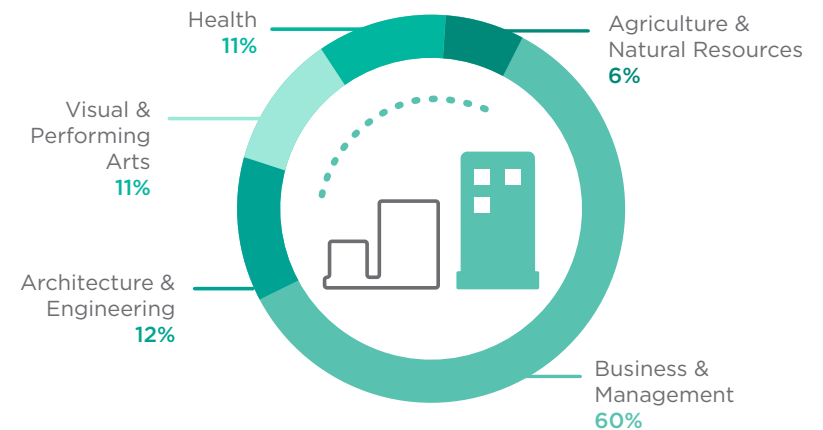


Entrepreneurial Capacity

Student Support



Programs that integrate entrepreneurship





Keys for Student-Focused and Economy-Responsive Education

- **Strong links** with industry
- **Pathways** to other institutions and parts of the education system
- **Forward-looking** orientation with **leading edge, real-world courses**
- **Inclusion of ICT** in education
- **Applied research** opportunities and support for innovation



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