

Challenges for Internationally Trained Engineers in BC and the Role of the Bangladeshi Engineers' Association

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Introduction

Canada is a melting pot – a nation of new immigrants. Originally inhabited by Aboriginal peoples, Canada saw its first immigration with the French and British colonization in the 17th century. The influx continued through the 18th and 19th centuries with United Empire loyalists who fled the United States during the American Civil War. A subsequent wave of immigration from Europe after the two World Wars brought many new cultures, languages and religious groups to Canada, resulting in many changes in government policy and the first laws to protect diversity. During the past 60 years, immigration has continued to flourish, with newcomers arriving from every corner of the globe. In 1971, Canada became the first country in the world to enact an official policy of multiculturalism, showing how valued diversity is in Canada's political and social fabric. The Canadian constitution, implemented by Prime Minister Trudeau in 1982, contained a Charter of Rights and Freedoms that protected multiculturalism. The Canadian Multiculturalism Act was introduced in 1988 and federal funds began to be distributed to ethnic groups to assist them in preserving their cultures.

Bangladeshis started to migrate to Canada in the 1960s, and professionals were the first category of immigrants from Bangladesh (Nazneen, 2003; High Commission for Bangladesh, 2017). Bangladeshis come to Canada under two major categories, namely the skilled workers category and the family category. Around 100,000 Bangladeshi-origin people are currently living in Canada, of which the lion's share is comprised of internationally trained, skilled workers.

Canada is a successful multicultural nation strengthened by national policies, where immigrants can continue their own professional and cultural practices, creating a diversified society. Yet skilled and/or professional workers face significant obstacles to obtaining work in the field in which they are trained (Geddie, 2002). Although internationally trained professionals hold credentials, experience and skills that constitute professional qualifications in their home

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countries, they are faced with the challenges of validating these credentials and obtaining required licenses to practice their profession in Canada. The Washington Accord recognizes the equivalency of education accreditation system programs only within the signatory countries, and from the year that the signatory was first recognized by the Accord (Engineers Canada, 2017). An engineer is an individual who has been issued a license to practice engineering by a provincial or territorial engineering regulatory body after demonstrating that they have the requisite education, skills, knowledge and experience. An engineer is sometimes referred to as a licensed engineer, a registered engineer or a professional engineer. Licenses are valid only in the province or territory where they are issued.

Newcomer Bangladeshi engineers who land in Vancouver and end up settling in British Columbia (BC) face similar challenges. Bangladeshi Engineers and Applied Scientists of BC (BEASBC) was created to provide support to internationally trained engineers (ITEs) from Bangladesh. The Association of Professional Engineers and Geoscientists of the Province of British Columbia (APEGBC) is the regulatory body in BC, and BEASBC has been working with the APEGBC Vancouver Branch to extend collaborative support to ITEs. The Internationally Educated Engineers Qualification Program (IEEQ) at the University of Manitoba was developed in 2003 to provide guidance and a pathway to obtaining formal recognition of foreign credentials for internationally educated engineers (IEEs) to meet professional licensing requirements of the local regulatory body (Friesen, 2013). This IEEQ model is currently being implemented at two other universities in Ontario. Implementation of the IEEQ model is urgently required in BC. An initiative has been undertaken in collaboration with UBC to implement this model in BC.

Challenges Encountered by Internationally Trained Engineers

Internally Trained Engineers seeking professional employment in their field when they come to Canada face particular barriers to finding employment that utilizes their skills because they must first gain a professional license before they can seek relevant jobs. This is because work conditions fall under provincial jurisdiction in Canada, and provincial governments delegate the regulation of professions to self-governing professional associations (APEGBC for the province of BC). For professionally trained recent immigrants, it is essential to obtain a professional license in the province to which they immigrate so they can practice their profession in Canada. This requirement makes their experience of finding

employment considerably more complex than that of immigrants in non-regulated professions.

Vancouver currently receives approximately 2500 new immigrants annually who wish to find work as “engineers.” APEGBC only issues licenses to work as a professional engineer to approximately 150-200 foreign-trained applicants annually (Geddie, 2002). Since the regulatory system was introduced in 1967, internationally trained professionals in Canada have been awarded higher admission points for criteria such as level of education, occupational training, and knowledge of English and French. The underlying belief was that individuals with these selected human capital characteristics could more easily enter the workforce, and thus could make significant contributions to the Canadian economy and to society. This policy has undoubtedly affected and enhanced the labour market qualifications of new immigrants. There has been a dramatic increase in the number of ITEs in proportion to the internationally trained principal applicants who declare upon arrival that they intend to work as engineers. As shown in Figure 10 the number increased from 3% to 31% between 1991 and 2000 (Geddie, 2002). Figure 11 shows how the number of engineers who declare themselves as engineers to BC and finally end up in Vancouver is also increasing since 1991.

The newcomer engineers who settle in Vancouver either come as immigrants with family after a number of years of service in their home country or other countries, or initially come as students in the graduate programs of the University of British Columbia (UBC) (Vancouver or Okanagan campus), Simon Fraser University (SFU) or the University of Victoria (UViC) and later apply for immigration. Some engineers think about getting into these graduate programs or obtaining a certificate from the British Columbia Institute of Technology (BCIT) when they realize that a local degree and/or work experience is very important to secure a professional job in Canada.

To work as an engineer, one must either be registered as a professional engineer or professional geoscientist, or work under the direct supervision of someone who is a registered professional engineer or professional geoscientist. Professional Engineer (P.Eng.), Professional Geoscientist (P.Geo.), Engineering Licensee (Eng.L.) and Geoscience Licensee (Geo.L.) designations are required to independently practice professional engineering or professional geoscience in British Columbia. On one hand, it is difficult to get a job without a license or registration with APEGBC.

Year	Principal Applicants (PA) to BC	PAs Reporting as 'Engineers' to BC	PAs Reporting as 'Engineers' to Vancouver	Engineers as % of PAs	Engineers in Vancouver as % of PAs
1991	4107	115	94	3%	82%
1992	3672	173	153	5%	88%
1993	4978	648	414	9%	88%
1994	5614	715	647	13%	90%
1995	7509	1010	888	13%	88%
1996	9976	1430	1307	14%	91%
1997	10153	1665	1596	16%	96%
1998	7171	1462	1394	20%	95%
1999	7675	2089	2045	27%	98%
2000	8196	2506	2444	31%	98%

Figure 10: Internationally Trained Professionals Declaring as Engineers in Vancouver (Geddie, 2002)

On the other hand, APEGBC requires that an applicant meet academic requirements and have at least one year of local job experience. If the applicant has completed his/her graduate degree from an institution offering accredited undergraduate engineering programs and he/she is found to meet minimum academic requirements, APEGBC may offer an Engineer-in-Training (EIT) or Geoscientist-in-Training (GIT) designation. If the applicant has more than five years of work experience in their home country, he/she may qualify for an interview to determine if the work experience and training from the home country are satisfactory to reduce or eliminate assigned confirmatory examinations. An ITE may still need to complete one year of related work experience in a Canadian environment. Newcomer engineers who face all these challenges and at the same

time have to support their families either end up doing non-professional jobs or suffer from the dilemma as to whether they will stay in Canada or go back home. APEGBC receives approximately 700-750 applicants for the P.Eng. each year.

Only 150-200 of these are “new” applicants, meaning most likely they are immigrants. The rest of the applicants have either obtained their license from elsewhere in Canada and are moving through inter-provincial mobility, or are moving up from the EIT/GIT program. Those who move up from the EIT/GIT program, have had their engineering education recognized and have completed four years of working experience under the supervision of a licensed engineer are in the process of the natural progression for recent graduates of Canadian “accredited” engineering programs. The “new applicants,” therefore, are generally immigrants who need to apply for licensing to work in Canada. According to APEGBC, nearly all “new” applicants were awarded a P.Eng. at some point. Yet the figure of 150-200 is shockingly lower than the almost 2500 people who landed in Vancouver in 2000 who declared engineering as their desired profession. Apparently, there are barriers that prevent large numbers of foreign-trained engineers from even applying for certification. Since its inception, BEASBC has been providing all possible support to these newcomer engineers to remove these barriers.

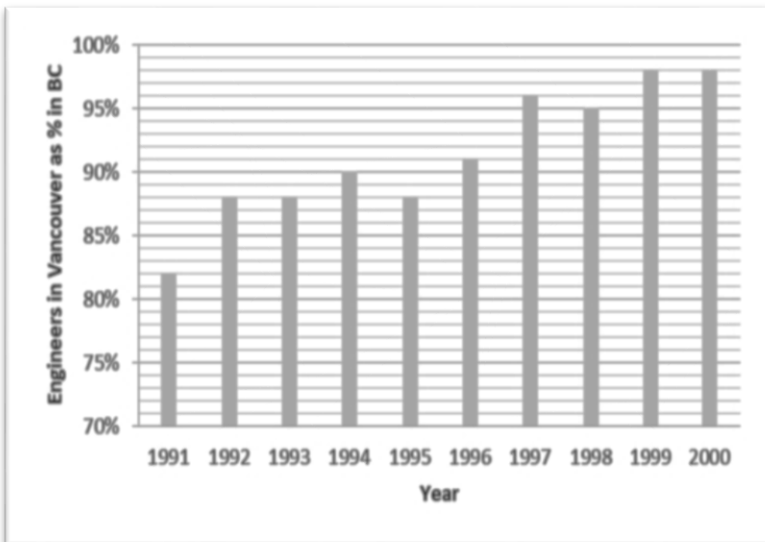


Figure 11: Trend of Engineers in Vancouver as % in BC

The Role of Bangladeshi Engineers and Applied Scientists of BC (BEASBC)

BEASBC was founded on March 6th, 2005 by a group of young Bangladeshi engineers who had either been working for a few years in Canada or completing their graduate degrees from UBC. It is a registered non-profit, non-political and non-religious voluntary engineering professional organization organized exclusively for educational, scientific, cultural and charitable programs. The purposes of the association are:

- To bring together and share ideas, technology and experiences between engineering professionals of Bangladesh and British Columbia (BC).
- To work towards the advancement of engineering professions of Bangladeshis in BC.
- To provide assistance in job search and career development for its members and affiliates.
- To conduct seminars and other educational programs.
- To provide mutual assistance and cooperation between the association and other non-political associations/societies and institutions.
- To help develop feasibility studies of various engineering and technological concerns of Bangladesh.
- To collaborate with public bodies and with other societies for the benefit of the engineering professions as a whole.
- To honour any individual/group who has made significant and outstanding contributions to the profession of Engineering, Geosciences and Computer Science.
- To carry out any other activities incidental or conducive to the above objectives.
- To help socialize among family members of engineers, computer scientists and geoscientists in BC.

Each year, starting from January 1st, the general management of the association is vested upon an executive committee (EC) comprised of the following positions:

- i. Chair
- ii. Vice Chair
- iii. Office Chair
- iv. Assistant Office Chair
- v. Finance Chair
- vi. Executive Members (4)

The EC is supported by an advisory committee consisting of three members from among the members or life members and selected by the general members. The EC seeks advice from the advisory committee for the good governance of the EC's affairs, if required.

Members and Benefits

The membership of the association consists of members, life members, fellow members and student members. A member of the association shall be a person of Bangladeshi origin with a degree (four-year Bachelor's, Master's or Ph.D.) in Engineering, Geosciences or Computer Science, who is a resident of BC. When a new engineer arrives in BC, the representatives of BEASBC contact him/her and invite him/her to attend any upcoming event and obtain membership. Currently, BEASBC has 183 members (Bangladeshi Engineers and Applied Scientists of BC 2017).

Members get multiple benefits from the association. To increase benefits to the members, the following sub-committees work tirelessly to support the EC:

1. Membership Committee
2. Technical Committee
3. Professional Advancement Committee
4. Fundraising Committee
5. Publication Committee
6. Professional Assistance and Job Search Committee
7. Constitution and Bylaws Committee
8. Any other committee deemed necessary by the EC

Recent Activities and Success Stories

BEASBC organizes professional training programs for engineers at affordable prices, wherein members who are already engaged in professional jobs provide voluntary services as resource personnel. These training programs have reportedly been useful for these engineers in helping them either strengthen their resumes or prosper in their careers.

Every year, BEASBC organizes a technical seminar where the members of the organization who are professionally established share their experience and knowledge in their respective fields with their fellow engineers. In these seminars, BEASBC always invites guests from APEGBC and other sister organizations that work with immigrants, such as MOSAIC, SUCCESS, the Multicultural Helping

House Society (MHHS) etc. A keynote speaker is also invited, from a reputed organization or based on his innovative work in the industry.

APEGBC recently identified that there are two main hurdles for ITEs in Canada:

- Communication Skills
- Cultural Gaps

To enhance the skills of newcomer engineers in these two areas, BEASBC organized a half-day workshop on November 2011 in collaboration with APEGBC and MHHS, which more than 40 engineers from different countries attended. Speakers from Applied Science Technologists and Technicians of BC (ASTTBC), APEGBC, Toastmasters Club and BEASBC made the workshop successful. Similar workshops are organized in connection with the technical seminars that take place every year.

The members of the association have a strong fellow feeling for each other. Originating from the same cultural background, they tend to help each other, especially the newcomers. BEASBC also organizes an orientation program to introduce newcomers to the other members and familiarize them with available resources. As part of that orientation program, newcomers get to know the members who are already in the Canadian job market including in senior positions. If there are opportunities, they try to refer the newcomers for those positions. Some of the senior members are also engaged with APEGBC and other voluntary organizations where they can create opportunities for newcomer engineers to serve in volunteer positions.

BEASBC also organizes job search and career development workshops where people from the industry, media and recruiting agencies are invited. These workshops familiarize newcomers with the industry and the requirements of the employer. Additionally, BEASBC organizes cultural programs, annual picnics and programs to recognize the contributions of the engineers in society and in their professions. BEASBC also organizes networking events when a distinguished individual who has made significant contributions to development in Bangladesh visits Vancouver. These events provide opportunities for the members to learn about recent development in Bangladesh and to mingle with fellow members.

Collaboration with APEGBC. The author is a founding member of BEASBC and served as the Vice Chair of the organization for the year 2008-2009. The author also served as the Chair of the APEGBC Vancouver Branch for the term 2014-

2015. While serving as the Chair of the APEGBC Vancouver Branch, the author initiated a coordinator position within the organization for ITEs. Since then, the APEGBC Vancouver Branch has been organizing events specifically for ITEs. One of the most successful events that the Vancouver Branch organizes is a panel discussion where experts in the industry speak about their experience and answer questions asked by the ITEs in attendance. The author always involves BEASBC in every possible way in the events organized by APEGBC, and keeps the members of BEASBC updated about the programs, events and development of APEGBC.

Collaboration with MHHS. BEASBC has organized several programs in collaboration with MHHS. Since the author is keen on helping newcomer engineers and is personally involved with an initiative to implement a bridging program (see below) in BC, BEASBC has organized two workshops each year since November 2014 for newcomer internationally trained professionals at MHHS with that organization's support. The most recent workshop was organized in May 2016 and focused on networking, with the theme "Your Network is Your Net Worth." Newcomer Bangladeshi engineers also attend the workshops. BEASBC also organizes its programs, meetings and events at MHHS, with MHHS providing support and incentive for those programs.

Collaboration with other support programs. BEASBC works closely with the other support programs available in Greater Vancouver, namely MOSAIC, SUCCESS and the Society for Internationally Trained Engineers (SITE), which provides services for ITEs. Representatives from BEASBC attend the events organized by these groups. BEASBC also invites local representatives to its events as special guests or as the chief guest. These networking opportunities with local representatives and politicians give insight into local and regional politics and systems.

Recommendations for the Future

BEASBC has already developed a solid track record in the community. The executives put their best efforts toward keeping the association vibrant and meeting its objectives. Continuous support from the members is needed to help move ahead and sustain the credibility of the association.

What is needed in BC for ITEs? Canadian regulatory agencies have always provided licensing pathways for newcomer engineers, often in the form of an assigned set of confirmatory exams to check engineers' technical background

and establish eligibility for licensure. As the number of immigrants is increasing every year, the government supports developing alternative pathways that will help integrate internationally trained professionals more quickly and efficiently while maintaining standards for public safety (Friesen, 2010).

It is widely discussed that within the Canadian industry, the formal recognition of ITEs confirms the need for alternative pathways to licensing where difficulties in Foreign Credentials Recognition (FCR) and obtaining at least one year of Canadian experience are the two primary obstacles to full market participation. Employers in the engineering sectors also concur that the most important factors that influence the ITEs' level of employment are related to Canadian experience (at least one year), communication skills and professional licensure. A formal FCR is only one aspect of the Qualification Recognition (QR) of ITEs. Other important aspects of QR include the acceptance by an employer of the engineer's credentials, as well as the employer's confidence in the engineer's skills and competence.

The Internationally Educated Engineers Qualification Program (IEEQ), developed in 2003 at the University of Manitoba, addresses QR for the ITEs who newly arrive in Canada. The IEEQ Program was developed to serve as an alternative licensing pathway. While the core of the program is general and technical subject matter, the exemplary programs include diverse components that provide opportunities to link participants to the community and the labour market, and address factors that influence labour market participation such as language, communication skills, Canadian work experience and knowledge of the culture in the industry, and professional licensing requirements. The program also provides an opportunity to gain experience in the Canadian job market through internship. Successful graduates of the program go through an easy transition into the Canadian job market. The IEEQ Program has been successfully launched at Ryerson University and the University of Toronto. The author is involved in an initiative with UBC Continuing Studies to implement this program in BC. Once implemented in BC, it will create opportunities for newcomer Bangladeshi engineers as well as engineers from other countries to obtain their QR easily and have an easy transition into the labour market. It is anticipated that the number of engineers reporting as engineers after their arrival will also increase significantly.

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