



*How can an online resource toolkit support international learners in the successful transition
from post-secondary studies to the Canadian workplace?*

by

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Abstract

International students in Canada are a growing industry that is impacting our communities. Canada is considered a safe and affordable country to attend post-secondary institutes and institutions. While over half of the international students in Canada plan to apply for permanent residence in Canada (Adamoski, 2015) cost of living and quality of life play an increasing role in location and post-secondary choices. British Columbia's (BC's) mild climate and varied terrain offers a draw for foreigners entering post-secondary studies. Most of this group gravitates towards the mainland and southwest regions, but recent increases in the cost of living will likely see this migration shift to smaller communities. Among other provinces and territories, BC has a vested interest in retaining Canadian-trained students in order to develop a healthy economy. In BC, international students are encouraged to remain in their communities of study and become contributing members of society. BC recognizes the economic value in retaining these educated graduates and encouraging them to become permanent residents. Provincial pathways to immigration guide this group through multiple immigration plans according to need and intention. In order to retain Canadian-trained international students, BC has developed a number of immigration pathways to immigration to meet the diverse needs of this group. The purpose of this Major Project is to connect international students to their BC communities and assist with providing relevant employment opportunities by providing an online toolkit as a resource to develop personal pathways to employment. Educators and prospective employers are also encouraged to use this toolkit to educate themselves and support international, Canadian-trained student in their intentions to remain in BC. Resource URL <https://pathways2bc.weebly.com/>

Keywords: Collaboratory, Community of Inquiry, Community of Practice, Developmental

Programs, Permanent Resident, Social Capital, Social Media, Social Presence

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Chapter 1 – Introduction

Purpose of the Major Project

Making connections instills a deeper sense of belonging and encourages international students to remain in Canada and attain gainful employment in their fields of study. Engagement in the community is a necessary springboard to the development of social ties and the desire to immigrate and actively participate in the Canadian workplace. My intention for this Major Project was to bring international students and local employers together to form bonds and relationships thus, strengthening the economy through the retention of Canadian-trained immigrants. The intention of an online toolkit was to form relationships between international students and their Canadian communities, so they could develop ties and bonds with domestic students, educators and local employers. Encouraging this group to follow personal pathways to immigration ensures that these Canadian-trained employees will become contributing members of the economy. As an educator of newcomers, I personally recognize the challenges this group faces in establishing belonging. Establishing an online community where participants share common interests and could have similar social experiences encourages international students to remain and work in Canada.

Transitioning from post-secondary education to the workplace has its challenges. If expectations and experiences do not meet the needs of this group of learners, retention and, ultimately, opportunities for permanent residency are dissolved. International students face multiple barriers, from language to local experience to social capital when seeking employment in their fields of study. “Building new social networks is often a challenge” for international students, especially if there is a language barrier (Banjong, 2015, p. 137). A living, online toolkit offers continuous support and presents various supports to overcome these obstacles.

Major Project Overview

The Major Project deliverable was a web-based toolkit encompassing various applications (apps), information and forums for international students. The main objectives were to expose students to local employers in their fields of study to nurture a sense of community and belonging. Multiple pathways to immigration were outlined and explained through examples to meet the needs of individual international students. Interactive maps of BC enabled students to populate their personal calendars and schedules in order to plan and participate in local events and activities. Education paths and streams were showcased through various tools and websites. Opportunities to participate in and contribute to forums were made available to students, educators and employers. The online toolkit benefits Canada as a whole, and BC in particular, in encouraging and supporting international students and graduates to stay, work and thrive as contributing members of our diverse society.

Through my current practice as an English as an Additional Language (EAL) instructor to newcomers, I understand how collaboration is directly related to the development of a sense of community. An online toolkit, populated with resources, paves the way for international students to enter the labour market— supported through networking opportunities, immigration pathways and forums. In my experiences as an educator, I have witnessed how social interactions play an important role in learning communities. When students are able to represent themselves through social presence by forming social ties, their sense of belonging increases. Social benefits of an online toolkit foster inclusivity and local awareness. Because of the influx of international students to Canadian post-secondary educational institutions, BC employers can leverage this population to benefit the local workplace.

Government Initiatives and Goals

Every year, British Columbia educates over 36,000 post-secondary international students in the public sector alone (Helsop, 2014). Gaps in local cultural knowledge and connections cause many to relocate, or return home post-graduation. Encouraging international students to remain in their Canadian communities, “is gaining momentum as a means of addressing Canada’s demographic challenges” (Ortiz & Choudaha, 2017, Attracting and retaining international students in Canada section), especially in relation to local economies. Federal and provincial governments have put forth pathways for Canadian-trained, international students to remain and work in their host communities. These initiatives strengthen local economies and stimulate population growth. In order to maintain Canada’s growth rate and stimulate the economy, pathways for foreign students have been put in place by federal and provincial governments. Post-secondary institutes and local communities need to build relationships with Canadian-trained students and graduates to act as catalysts to employment. Recruiting skilled international students is “a means of addressing Canada’s demographic challenges” (Ortiz & Choudaha, 2017, Attracting and retaining international students in Canada section). An increase in international students deepens the pool of eligible Canadian-trained employees for local employers to draw from. Figure 1 presents survey findings that indicate the BC regions and headcount of international students attending public post-secondary institutes in the 2012/2013 year. Although smaller education centres and language schools also contribute to a growing foreign student population in BC, they were not included in this report.

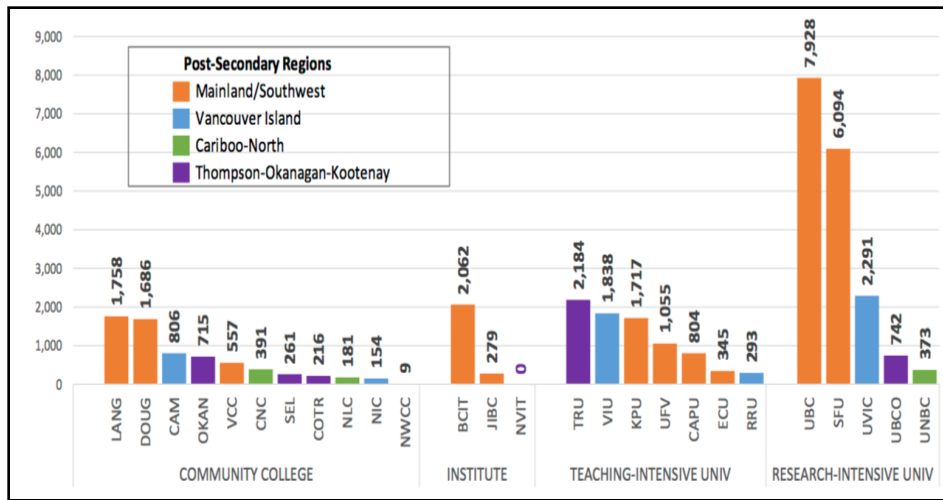


Figure 1. International students in BC public post-secondary institutes in BC 2012/2013

Federal Initiatives. Immigration, Refugees and Citizenship Canada (IRCC) has initiated objectives to increase immigration throughout all regions of Canada. Part of this initiative includes the Provincial Nominee Program (PNP) in that “all provinces and territories except Nunavut and Quebec, conferring on their governments the authority to identify and nominate for permanent residence immigrants who will meet local economic development and regional labour market needs” (Citizenship Canada, 2016, April 26, sub-program 1.1.4: Provincial nominees section). The Canadian Experience Class (CEC) aims to focus on leveraging international graduates to populate the country with skilled employees. Through its multifaceted pathways, foreign students in Canada are encouraged to apply via various streams. Express entry within the federal system allows for provinces and territories to develop and promote their own pathways to immigration. British Columbia has enabled express entry into the province through the Provincial Nomination Program (BC PNP). Based on strategic requirements, newly skilled applicants can apply through this avenue with support from their local employer (BC PNP Pathways, 2018). Although IRCC has been “modifying and updating many recent initiatives aimed at attracting and, perhaps more importantly, retaining international students after

graduation” (Ortiz & Choudaha, 2017, Attracting and retaining international students in Canada section), federal initiatives need to be supported by post-secondary institutes and local communities. Successfully transitioning international students from study to the workplace is a collaborative effort. Although Citizenship Canada (2016) makes final decisions regarding immigration, applicants still must meet “the skills, education and work or business experience of prospective candidates to ensure that nominees can make an immediate economic contribution to the nominating province or territory” (Sub-program 1.1.4: provincial nominees section). Each province or territory has slightly different parameters, including BC.

British Columbia initiatives. As shown in Table 1, IRCC reported over 130, 000 international students having attended BC both public and private post-secondary institutions and language schools from 2015-2016, continuously exceeding projected targets (Ministry of Advanced Education, 2017). This province has projected initiatives to grow the international education sector and direct foreign students to provincial post-secondary institutes. As the projected growth continues to increase along with economic demands, so will opportunities for international students across BC.

Table 1
International Students Studying in BC

	Baseline	2015 Actual	2016 Target	2016 Actual	2017 Target	2018 Target
International Students in BC	90, 037	130, 053	135, 056	136, 905	TBD	TBD

Note. adapted from Ministry of Advanced Education 2016/17: annual service plan report

Between 2012 and 2015, BC’s International Education Strategy (IES) put forth a list of goals and plans to maximize the benefits of international students studying in the province.

Figure 2 represents the total number of students attending public post-secondary institutes by

region, presenting a continuous growth pattern throughout BC. The IES outcomes and deliverables strived to increase “the number of international students choosing BC as their study destination by 50 per cent” (2012, p. 13) across those four-years. The province plans to leverage the income generated by tuition and retain graduated students to benefit the Canadian workforce.

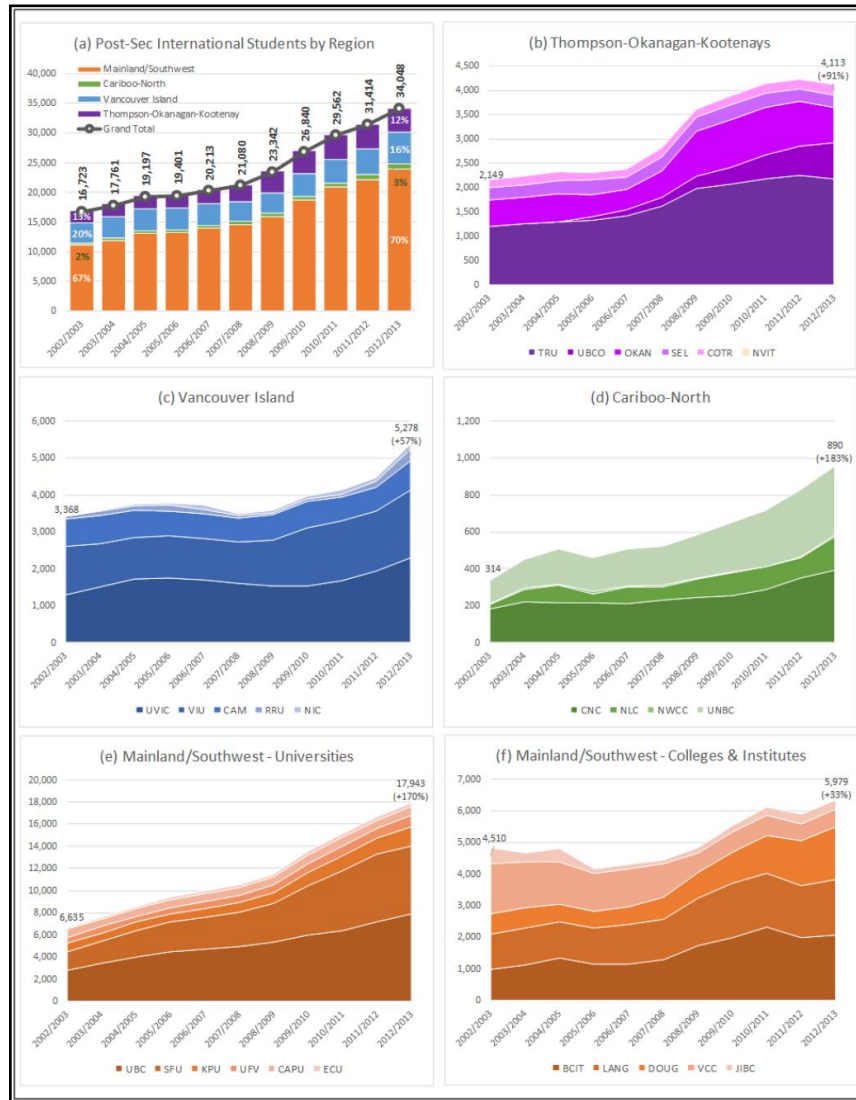


Figure 2. International student enrolment growth by BC region

Through the National Occupational Classification (NOC) system, foreign students with intentions to remain in Canada are encouraged “to study in specific high-demand fields” (British Columbia’s international education strategy, 2012, p. 22), like healthcare and trades. BC

anticipates a shortage of employees and “emerging labour market challenges make international education even more important [in the coming years]” (British Columbia’s international education strategy, 2012, p. 10).

The province of BC conducted a survey comparing the number of domestic students to international students. It is important to note that the “University of British Columbia, University of Victoria, Simon Fraser University and the University of Northern British Columbia” were not referenced in this survey; the former two are great contributors to the international post-secondary population. Although this data clearly indicates that domestic students have a vastly higher headcount than foreign students, the grand totals are still considerable high. This presents a need for support post-graduation across BC, as the international student population increases from 2012 - 2016, predicting continued future growth. Because registration can fluctuate throughout the fiscal year, I have included the headcount on a given day, November 1st, across this 4 year span (See Table 2). Despite the missing data from major contributing universities, international students rank just under 10% of the total unique headcount, according to this survey (Ministry of Advanced Education, 2016). Notes 1, 2 and 3 indicate the total number of students registered in all areas of study, who payed international tuition fees and were counted only once, despite the fact that they may be attending multiple post-secondary schools.

Table 2
Total Domestic and International Headcount

Student Headcount ¹ by Institution on November 1 2012 to 2015												
	Domestic Students				International Students ²				Total Student Headcount			
	2012	2013	2014	2015	2012	2013	2014	2015	2012	2013	2014	2015
COLLEGES												
Camosun College	9,205	9,125	8,790	8,780	570	790	1,155	1,250	9,775	9,915	9,945	10,030
College of New Caledonia	3,350	3,150	2,970	2,815	270	250	310	360	3,620	3,400	3,285	3,180
College of the Rockies	3,025	2,900	2,605	2,535	145	150	220	280	3,170	3,050	2,825	2,820
Douglas College	11,710	12,100	12,330	11,885	1,160	1,370	1,545	1,705	12,870	13,470	13,875	13,590
Langara College	12,065	11,940	11,685	11,245	1,155	1,360	1,805	2,025	13,220	13,305	13,490	13,270
North Island College	3,575	3,530	3,335	3,265	100	140	205	260	3,675	3,670	3,540	3,525
Northern Lights College	1,420	1,440	1,155	1,030	80	110	225	365	1,500	1,550	1,385	1,390
Northwest Community College	1,135	1,355	1,205	1,165	5	*	*	10	1,140	1,360	1,210	1,175
Okanagan College	7,205	6,950	6,535	6,620	450	430	495	575	7,660	7,380	7,035	7,195
Selkirk College	3,095	3,370	3,505	3,720	135	160	305	505	3,230	3,535	3,810	4,225
Vancouver Community College	9,890	9,295	7,690	6,545	285	305	325	365	10,180	9,600	8,015	6,910
COLLEGES Total	65,685	65,155	61,815	59,605	4,360	5,075	6,600	7,705	70,045	70,225	68,415	67,315
INSTITUTES												
British Columbia Institute of Technology	21,070	21,215	21,120	20,935	1,225	1,225	1,150	1,490	22,295	22,440	22,270	22,425
Justice Institute of British Columbia	3,435	4,195	4,165	4,790	35	20	5	85	3,465	4,215	4,170	4,875
Nicola Valley Institute of Technology	670	715	525	440		*	*		670	720	530	440
INSTITUTES Total	25,175	26,130	25,810	26,165	1,255	1,245	1,160	1,575	26,430	27,375	26,970	27,740
UNIVERSITIES (not including UBC, UVic, SFU and UNBC)												
Capilano University	8,525	8,215	7,295	6,635	625	660	790	890	9,150	8,875	8,085	7,525
Emily Carr University of Art and Design	2,170	2,230	2,055	2,170	345	355	425	420	2,515	2,590	2,480	2,590
Kwantlen Polytechnic University	12,740	12,955	12,655	12,240	1,120	1,325	1,530	1,455	13,865	14,280	14,185	13,700
Royal Roads University	2,260	2,195	2,090	2,060	185	270	390	440	2,445	2,470	2,480	2,500
Thompson Rivers University	13,305	14,165	13,565	13,705	1,890	2,070	2,070	2,120	15,190	16,235	15,635	15,825
University of the Fraser Valley	9,320	9,265	8,945	8,895	680	710	820	900	10,000	9,970	9,765	9,795
Vancouver Island University	8,205	8,045	7,750	7,365	1,245	1,375	1,505	1,525	9,450	9,415	9,255	8,890
UNIVERSITIES Total	56,525	57,070	54,350	53,075	6,090	6,765	7,530	7,755	62,615	63,835	61,880	60,830
Unique Headcount³	145,285	146,100	139,855	137,025	11,620	12,985	15,170	16,875	156,905	159,085	155,025	153,900

Note. Retrieved from Ministry of Advanced Education 2016: total headcount

Assisting the BC initiative through web-based supports, my Major Project meets the priorities of the province. Although other provinces and post-secondary institutes have developed and maintained pathway programs for international students, BC has yet to provide such a product. An online toolkit integrates international education with the local community through pathways offering information and collaboration in support of retaining and encouraging students to remain and work in BC.

Economic Value

International students in BC recognize that there are “fewer opportunities... compared to their Canadian counterparts in areas such as scholarships, off-campus employment, and even unpaid internships.” (Humphries, Rauh, & McDine, 2013, p. 36). The need to develop social and monetary ties to this group’s host community is satisfied through an online toolkit. This resource can be accessed anywhere, anytime by all participants. Facilitating bonds between foreign

students, domestic students and local employers closes the gap in isolation and disconnect between international students and the community. International students entering the workforce, “particularly in key sectors and regions, helps meet looming skills, trades, technical and professional needs” (British Columbia’s international education strategy, 2012, p. 10). Canada continues to encourage “skilled migration, particularly through the recruitment of international students” (Ortiz & Choudaha, 2017, Attracting and retaining international students in Canada section) in order to address economic needs and population decline. Growth and retention will continue to climb if post-secondary institutes offer positive experiences and maintain accessible support to the changing needs of international students. A rise in international students entering the workforce meets labour market needs “creates jobs, fosters research and [facilitates] innovation” (Ministry of Advanced Education, 2017, p.14).

Social and Cultural Benefits

Canada continues to be a “popular destination for international students, and the influx of foreign scholars provides significant economic, social and cultural benefits [to local employers and the community as a whole]” (Humphries, Rauh, & McDine, 2013, p. 39). In particular, Canada is known for its tolerance and acceptance of newcomers as it fosters a safe harbour for international students. Canada has a global reputation for being a “tolerant society, built upon the principles of multiculturalism” (Humphries, Rauh, & McDine, 2013, p. 31). These qualities make it an attractive education destination to foreign students looking for quality education and experiences. With this in mind, international students in post-secondary schools set high expectations for their educational experiences.

An online toolkit assists foreign students in acclimatizing to their new environments. Participants are guided through various pathways to learn more about their BC community and

have opportunities to network and develop relationships that help them to navigate their way to employment and beyond. Foreign students are more vulnerable due to limited of social connections and language barriers; they have “fewer resources to cope than Canadian students” (Humphries, Rauh, & McDine, 2013, p. 38). Therefore, supports from the community and school are needed to create an environment of inclusion. Improving resource accessibility and easing navigation through an online toolkit relieves some of these stressors for this group. The ability to develop social networks and ties to the local community is key to sustaining and retaining international students pre- and post-graduation. Limited English skills and knowledge about Canadian culture and social norms can be relieved through the development of relationships and social networks” (Humphries, Rauh, & McDine, 2013, p. 38). Offering online support and information through a ‘one-stop-shop’ toolkit can help facilitate integration and assimilation. Connections to the local community mitigates isolation that international students often experience upon arrival in Canada (Humphries, Rauh, & McDine, 2013).

Critical Challenge Question

Through the lens of current research, my Critical Challenge Question sets the context for investigations that led to the development of my MEEdL Major Project; “*How can an online resource toolkit support international learners in the successful transition from post-secondary studies to the Canadian workplace?*” Findings from my investigations informed my Major Project build with the online toolkit as the key deliverable. This toolkit serves as an interactive, web-based ‘one-stop-shop’ with a welcoming message and a place to gather information and collaborate to alleviate the pressures often experienced by international students transitioning from post-secondary studies to the Canadian workplace. It provides a place to communicate with peers, educators and local employers, develop a sense of social presence and a virtual connection

to the community that will lead to integration and, ultimately, permanent retention of international students.

Current and “emerging labour market challenges make international education even more important” (British Columbia’s international education strategy, 2012, p.10) as BC anticipates specific needs for Canadian-trained employees in fields determined by the National Occupancy Classification (NOC). As Canada strives to double the number of international students by 2022 (Ortiz & Choudaha, 2017, Attracting and retaining international students in Canada section), provinces and territories should be prepared to accommodate and support newcomers, both socially and economically. Offering a plethora of dynamic resources through an online toolkit and Collaboratory can pave the way to successful integration and acclimatization of foreigners in BC. This toolkit incorporated various pathways for international students to “bridge the gap between their career desires to pursue employment and permanent immigration and their actual experiences of entering the local labour market” (Arthur & Flynn, 2011, p. 234).

Pathways2BC: A Resource Toolkit

The online toolkit displays up-to-date resources and apps to inform users of current policies and procedures for pathways to education, immigration and employment. The web-build offers recommendations for learning, living and working in BC— satisfying expectations for newcomers. An online forum fosters positive student experiences and asset users in making connections that lead to a sense of community and local, relevant employment. Arthur & Flynn stated (2011) that “voices of international students are an essential aspect of shaping the kinds of services that will meet their needs and help them with integration into the countries where they pursue employment and permanent immigration” (p. 235). Pathways2BC is an online toolkit that also assists international students in transitioning from post-secondary to employment to,

perhaps, permanent residency. Existing resources developed by provinces, regions and institutions assist international students in settlement and post-secondary institute, both web-based and face-to-face. Therein lies the BC gap. Nothing specific to the BC context exists to assist and support international students on a pathway from education to immigration and the local workforce, through an online toolkit. By presenting various pathways to BC through education employment and immigration the online toolkit paves the way for successful retention of Canadian-trained students and graduates. The use of personalized and collaborative tools in the kit assists both international and domestic students, educators and BC employers in making connections and informed decisions regarding future endeavours. By delivering positive experiences and living up to student expectations, BC can pave the way from education to the workplace for newcomers.

Key Terms

Research and findings have confirmed the need for continued support as international students transition from education to the workplace in BC. The following terms define some of the language used throughout this Process Paper. The terms were selected based on their multiple or various definitions across areas of study and are included to clarify meaning and intent.

Term	Definition	Source
Collaboratory	An open, online space, where a group of people with the same interests can work together to collaborate, share experiences, and work together to solve problems	https://en.wikipedia.org/wiki/Collaboratory
Community of Inquiry	“...represents a process of creating a deep and meaningful (collaborative-constructivist) learning experience through the development of three interdependent elements – social, cognitive and teaching presence”	https://coi.athabascau.ca/coi-model/
Community of Practice (CoI)	A group of people who share a common goal, outcome and interest, and “learn how to do it better as they interact regularly.”	http://wenger-trayner.com/introduction-to-communities-of-practice/
Developmental Programs	Academic skill development, short-term programs, usually in preparation for higher level	http://www.bccat.ca/pubs/ISSReport2015

Term	Definition	Source
	learning, for example, EAL	
Permanent Resident	Federally granted permission to immigrate to Canada without being a citizen; a pathway to citizenship	https://www.canada.ca/en/immigration-refugees-citizenship/services/new-immigrants/pr-card/understand-pr-status.html
Social Capital	“...a value resulting from occupying a particularly advantageous position within a social network”	http://ceur-ws.org/Vol-1183/gedm_paper03.pdf
Social Media	Web-based applications that enable sharing of content among users, for example, Twitter Facebook and Google Plus.	http://www.bccat.ca/pubs/ISSReport2015.pdf
Social Presence	The ability to identify and communicate within a community, and “develop interpersonal relationships by way of projecting their individual personalities”	https://coi.athabascau.ca/coi-model/

The Major Project was informed by a comprehensive literature review presented in Chapter 2 and was designed as a resource for both international and domestic students, as well as local employers and educators. The Critical Challenge Question addressed the need for international students to make connections as they transition into the BC workforce.

Chapter 2 – Literature Review

Introduction

With the growing number of international students and newcomers to BC, there are evident advantages to paving the way for employment support and community integration. IRCC supports Canadian-trained, international students who intend to remain in Canada and apply for permanent residency. Providing a short list of categories, IRCC has facilitated this transition from education to immigration, with employment in their fields of study as the ultimate goal. Canada's priority for international students is to encourage retention so that they can become contributing members of the economy (Citizenship Canada, 2016). Although the criteria are clearly defined by IRCC, transitioning from post-secondary to the Canadian workplace can be an overwhelming process for international students. Some communities in BC have been struggling to retain international students, partially due to migration away from smaller centres to larger urban areas. Alternatively, international students may choose to return home after graduation, or relocate to other English speaking countries. Other factors, such as acculturation, language requirements, social presence, expectations, finances and lack of work experience also affect retention among international students. BC's International Education Strategy (IES) prioritizes "preparing [both] domestic and international students to succeed in the global economy" (Adamoski, 2015, p. 44). By paving the way from studies to employment through supports, smaller post-secondary institutes can also assist in this priority. The IES has forged "pathways to commerce, research and innovation" through international education (British Columbia's international education strategy, 2012, p. 22).

Immigration Pathways, Plans, and Priorities

Some of the paths to immigration require students to gain eligible Canadian work experience. The Canadian government has presented clearly defined categories for international students to remain in Canada and gain permanent residency through the CEC initiative. In order to navigate CEC, international students must adhere to specific criteria, including, but not limited to, Canadian work experience and language requirements. Those who intend to remain and work in Canada after they graduate must apply for a work permit under the Post-Graduation Work Permit Program (PGWPP). A benefit of the program is that it offers great potential for international students to boost the population of a community as they represent a fast growing population across Canada (Ortiz & Choudaha, 2007).

Canadian Experience Class. The most reliable pathway for international students to immigrate to Canada is through the CEC program. Although Canadian education is not a requirement for this path, language ability coupled with work experience based on a points system facilitates successful applications. International students can collect points towards permanent residency, through local, relevant, employment but cannot include work experience accrued during their studies. Co-operative education, internships or apprenticeships do not qualify as evidence of work experience in this program. The more points the applicants have, the better success in attaining permanent Canadian residency. Additional points are rewarded to those who have “studied at Canadian post-secondary institutions . . . and whose English or French was at high academic level” (Neatby & Yogesh, 2017). The CEC “provides a streamlined route to permanent residence for those who have already established themselves in skilled work in Canada” (Citizenship Canada, 2016, sub-program 1.2.1: International students section). Because this program relies on language ability, there are distinct criteria for this path. Applicants need to prove their listening, speaking, reading and writing skills, in either English or French, in order to

apply. Application begins with developing an Express Entry online profile. International students wishing to obtain permanent residence in Canada must “take an approved language test, get the minimum results required by [their study] program, [and] include the results” on their profile (Citizenship Canada, 2017, July 17, Language requirements section). For international students, language ability is measured against either the International English Language Testing System (IELTS), or, the fee-for-service Canadian English Language Proficiency Index Program (CELPPI). Those wishing to prove language skills in French take the Test d’Évaluation de Français (TEF) (Citizenship Canada, 2017). Applicants who do not meet the minimum requirements are immediately rejected, but have options to re-apply once they have successfully passed any of the approved tests. Careful considerations must be in place when taking either language test because results are only valid for a two year period. Eligibility for CEC relies on specific work experience gained in accordance with the Canadian National Occupational Classification (NOC). If international students are not aware of all the nuances of this process, details may be missed and applications may be rejected.

BC Provincial Nominee Program. Provincial and territorial governments are putting forward initiatives to encourage retention of skilled, trained applicants to immigrate to designated provinces through the CEC stream. The BC PNP “offers three ways to become a permanent resident in B.C. Each pathway contains different categories [dependent on] NOC skill level, job, or international student status” (BC PNP Pathways, 2018, BC PNP pathways section), This pathway also stipulates specific English language requirements. Those that have graduated from an eligible Canadian university or college within the last three years can apply for PNP through Express Entry BC (EEBC) as international graduates. An offering of full-time employment that utilizes earned qualifications and suggesting ability for international graduates

to support themselves in BC are some of the requirements of this pathway (BC PNP Pathways, 2018). The applicant must also gain certain supports from the eligible employer. The BC PNP Pathways (2018) employer must be in good standing and be able to offer full-time work, “meet domestic labour market recruitment requirements” among other criteria (Employer requirements section). Through the BC PNP, the employer and employee work together to prove eligibility by meeting criteria laid out by BC. This pathway is directly linked to a viable employment path, recognized by the province.

The National Occupation Classification Effect. The NOC defines skilled work experience as: “Managerial jobs (NOC skill level 0), Professional jobs (NOC skill type A), Technical jobs and Skilled trades (NOC skill type B)” (Citizenship Canada, 2017, October 24, Skilled work experience section). Under Citizenship Canada regulations, perhaps the most challenging criteria is the 12 months of full-time, or part-time equivalent, in the three years prior to applying, “in an occupation at the NOC 0, A or B level in Canada” (2017). Because the skills international students need depend on employment classifications, this group needs to take extra care in selecting education programs and institutions.

A careful analysis of education plans, essential skills and the labour market would assist international students in their education plans and post-graduation paths to immigration and employment. Online tools can assist, offering guidance to international students and facilitating successful permanent residency. Clarity in policies and procedures is essential, as program decisions and local employment opportunities rely on one another when considering immigration paths.

Post-Graduation Work Permit Program. IRCC has implemented a pathway in order to encourage international students to gain Canadian work experience by authorizing “work either on or off-campus without a work permit, or as part of a co-op or internship program with a co-op work permit” to be counted towards a citizen application (Citizenship Canada, 2016, sub-program 1.2.1: International students section). Although many students take advantage of this program, this type of Canadian experience does not assist in immigration applications and permanent residency. It often allows students to populate their resumes, but may not be specific to their preferred educational fields. In order to secure employment post-graduation, students who have completed at least two years of post-secondary education can apply for a work permit through the PGWP process, allowing them to claim up to three years of Canadian work experience. This permit allows them to collect further points should they proceed to immigrate through the CEC program. International students are limited to employment at a NOC 0, A or B, graduated from full-time education, employed in full time work, or “equal amount in part-time hours” and prove minimum language abilities (Citizenship Canada, 2017, October 24, Skilled work experience section) should they choose this route. The BC International Student Survey identifies that international students have the desire and recognize the need to develop Canadian work experience as part their education plans. In fact 70% of those surveyed identified this as the main reason for working, surpassing the need to build resumes or acquire spending money (Adamoski, 2015). Figure 3 identifies a group of international students and their reasons for working while studying in BC post-secondary schools.

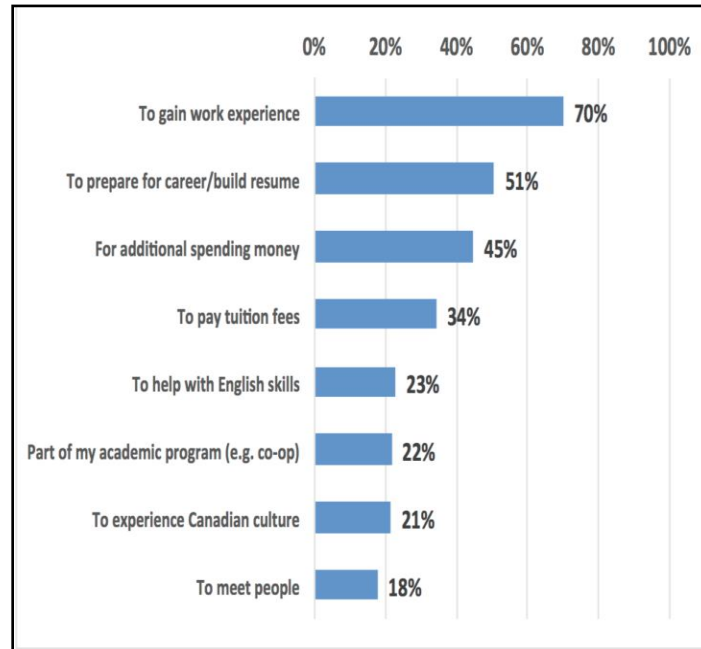


Figure 3. Data from the BC international student survey

Canada's Dynamic Immigration Policies

In Canada, we have undergone great changes in immigration, and continue to do so, as our community demands and populations shift. With so many moving parts, international students need to have their visa paperwork organized and timed in order to complete the immigration process. International students are restricted by their limited visas. One expired document could require more time and money, resulting in application setbacks. Waiting for work permits and reapplying for corresponding visas can be costly. Rejected applications have an adverse effect on international students seeking permanent residency in Canada.

Although federal officials declare international students the “preferred stream of immigrants,” many are “...instead returning home in frustration due to confusion about immigration programs and a lack of coordination between provincial and federal governments” (Neatby & Yogesh, 2017). Without comprehensive information, organized timing around

various applications and their expiry dates, along with changing policies, some international students abandon their plans to immigrate to Canada. Difficulties that international students often face in order to acquire permits and visas “...elevate their expectations in terms of the returns on their investment” (Ortiz & Choudaha, 2007, International student retention dependent on delivering positive experiences section). This contributes to problems in retention and results in potential economic loss in the local labour market. Those who wish to start a new life in Canada must proceed with intention and seek continuous support.

International Student Intentions

In choosing a post-secondary destination, international students rely on various sources of information: family, friends and, commonly, online resources. Becoming familiar with the educational system may influence intentions, as far as geographical location, post-secondary institute and program selection. International students also rely “on information from websites other than those maintained by post-secondary institutions” (Adamoski, 2015, p. 22). Navigating resources is a main component in selection of post-secondary institutions, along with personal references and online resources. Potential international students also rely on immigration experts and consultants. Although many post-secondary institutes provide onsite, certified immigration support and offer on campus career services, (as well as other forms of advising), time constraints, limited number of appointment slots and availability often restrict such services. Face-to-face opportunities are not always logistically practical. Comprehensive online support, available anytime, anywhere, would alleviate the pressure on these resources and better serve the students' various needs.

In a recent survey, social media networks are noted as influential in post-secondary education intention: “Facebook, YouTube, LinkedIn, Google+ and Twitter...have been identified

as the top social media networks among international students in Canada” (Adamoski, 2015, p. 23). Online access to ‘quick bites’ of information assists this student demographic in making informed decisions. Social media could be leveraged to improve recruitment and retention of international students to post-secondary institutes in smaller communities. It is a powerful tool that has the potential to gather and disseminate small pieces of information to a large following anywhere, any time.

Although accessibility of information ranks high among international student intentions, Adamoski (2015) also states that location, tuition and cost of living also factor into the decision-making process. With the increase in the cost of living in urban centres, smaller communities in BC may see a rise in international enrolment. Adamoski (2015) reports that international students “sought employment in order to gain practical work experience to launch their careers” either in Canada or their home countries (p. 40). Of worthy notation, Canadian-trained “graduate students were most likely to indicate plans to stay in Canada, while students in developmental programs were more than twice as likely to report intentions to return to their country of origin” (p. 46); although, international students may face barriers and have disadvantages over their domestic counterparts in attaining gainful employment post-graduation. Adamoski (2015) reports that cultural experiences and quality of education also play important roles in choice and intentions.

Figure 4 reports on the percent and totals of international students who participated in developmental, undergraduate and graduate studies in BC in 2012/2013. The report indicates preference in BC’s undergraduate post-secondary programs, surpassing graduate and developmental areas of study. This enrolment trend justifies a need to retain undergraduate international students as they complete their education and intend to enter the BC workforce.

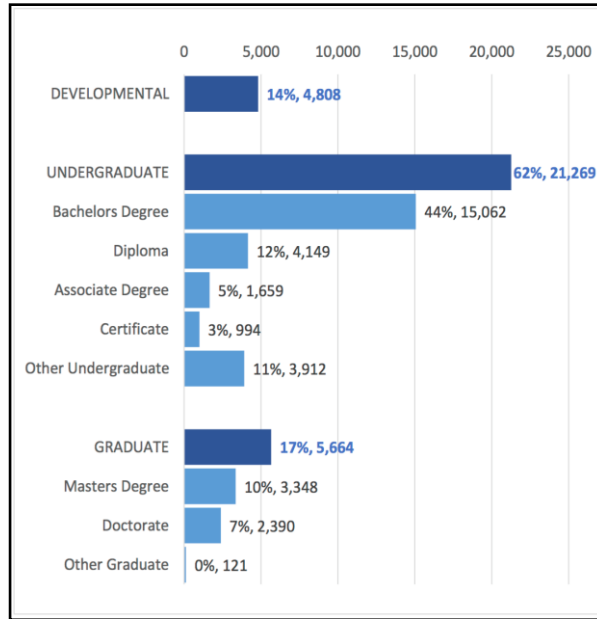


Figure 4. International students by level and credential in public post-secondary schools

Initial Assumptions of Need

Post-secondary institutions have not kept up with the influx of international students and the requisite changes in immigration policy. Lack of social services and support continues to fail international students. Although academically capable, many “international students whose English-language proficiency does not yet meet the requirements for direct entry” fall short of the necessary requirements for immigration post-graduation (Neatby & Yogesh, 2017). There is a “need to examine the linkage between changing Canadian immigration policy and institutional programs and services” for current and potential international students obtaining their education in Canada (Arthur & Flynn, 2011, p. 235). Students in short term programs experience this the most. By the second and third year, students begin to interact and network among themselves, and with domestic classmates. Interaction is more frequent within cohorts and among students participating in similar fields of study.

Barriers between domestic and international students, “as well as best practices to address such challenges, remain only partly identified” (The Integration Challenge: Connecting

International, 2015, p. 2). Forming social bonds leads to a sense of community and inclusion. Without these bonds, international students are challenged to adapt and integrate fully in Canadian society. The “segregation between domestic and international students is also a common issue” decreasing acculturation and assimilation among international students (Neatby & Yogesh, 2017). International students often struggle to build Canadian relationships and make local friends. Social capital disables this group and inhibits societal function.

As immigration procedures adjust with BC’s dynamic population, “there is a need to examine the linkage between changing Canadian immigration policy and institutional programs and services directed at international students” (Arthur & Flynn, 2011, p. 235). Although sufficient supports are not yet provided by Canadian post-secondary institutions, students are continuously encouraged to move away from their home countries and immigrate to Canada. Arthur & Flynn (2011) acknowledges that pathways from education to contributing members of Canadian society are needed to bridge the gaps between “career desires to pursue employment and permanent immigration” (p. 234). Experiences from education into the local labour market pave the way for successful immigration and settlement and have a direct effect on acculturation. “Promot[ing] the interests of international students in the institutional community, and provid[ing] meaningful opportunities for interaction that promotes intercultural and mutual understanding between international students and other members of the institutional community” assists in retention, and furthers settlement, of international students in BC (The Integration Challenge: Connecting International, 2015, p. 2). Community collaboration has great benefits to international students and deeply affects intentions, motives and desires to remain in their communities of study.

A Collaboratory

Creating a Community of Practice by bringing together interested parties with a common goal fosters an environment of collaboration. A Community of Practice is formed when participants “engage in a process of collective learning in a shared domain of human endeavor” (Wenger-Trayner, 2015, p. 1). An online Collaboratory provides a place for likeminded members to gather, share and store information. Initially, such a virtual space included parties specifically from the scientific community. It provided “an environment where participants make use of computing and communication technologies to access shared instruments and data, as well as to communicate with others” at a distance (Collaboratory, 2018, Collaboratory section). Communities of Practice are brought together by a “shared domain of interest” enabling parties to interact and share “experiences, stories, tools, ways of addressing recurring problems” (Wenger-Trayner, 2015, p. 2). By expanding to the Humanities, this type of Collaboratory could also include participants of any field with the same interests, allowing them to join forces and explore innovations via a web-based platform. An online space where international and domestic students, educators, local employers and stakeholders can gain access to information and resources benefits the community and strengthens the economy. An online Collaboratory provides a “place where people can think, work, learn together, and invent their respective futures” (Collaboratory, 2018, The Collaboratory as a creative group process section) across time, space and place. The ability to remain in contact throughout educational experiences benefits both the international student and the broader, societal community. Because this group is mobile and may travel to and from their home countries, or other areas, separation and disconnection can result in a diminished educational experience. A strong connection to the local community from anywhere, anytime, enables stronger bonds and relationships within the

educational setting. Web access “expands the possibilities for community” (Wenger-Trayner, 2015, p. 6). In contrast, lack of such connections may lead to isolation.

Isolation. Isolation affects international students more so than their domestic counterparts in certain circumstances. Without a strong set of local community experiences, this group is at a disadvantage. Although many international students find it less difficult to meet “Canadians through their program of study: the classroom, study groups and group projects” (The Integration Challenge: Connecting International, 2015, p. 3), these relationships are often superficial and lack depth, landing in the ‘acquaintance’ category. Domestic students enter post-secondary education with a set of skills that international students lack-- be it employment experience, language advantages, knowledge and familiarity with social norms, or, a cultural base. Because of this, it takes time for international students to become comfortable in their new communities. Some have found success “meeting and forming friendships with other international students through the international student community” (The Integration Challenge: Connecting International Student, 2015, p. 3), leaving little room for acculturation. The lack of cultural exchange, coupled with insufficient language skills, further inhibits adaptation and a feeling of belonging. There is a sense of “timidity, fear, and isolation among international students” as the result of language barriers coupled with the inability to effectively communicate with domestic students or employers (Banjong, 2015, p. 137). Without confidence in language skills, students may hesitate to look for gainful employment or social relationships that are integral ties to integration and settlement in Canada.

Kamara’s (2017) study suggests that “the integration of international students have highlighted acculturative challenges that threaten students’ ability to thrive” (p. 295) in their educational settings and new communities. These students may have a desire to assimilate, but

strong familial and social ties to their native culture prevent the desire for integration and permanent residency in Canada. Preservation of identity and a sense of self are evident throughout workplace and educational environments. Post-secondary education can leverage this desire by “incorporating knowledge of students’ diverse learning styles and support preferences into the development of support infrastructures” (Kamara, 2017, p. 295). Time spent at a post-secondary institute has a direct relationship to an international student’s sense of community.

International students develop a “feeling more settled and feeling more knowledgeable and confident about Canadian culture and languages” the longer the program (The Integration Challenge: Connecting International, 2015, p. 5). This insinuates that longer programs, such as undergraduate or graduate level programs, increase attachment because of the amount of time spent in their new community, whereas those graduating at the developmental level (1-2 year programs) may not have this opportunity. In addition, the number of graduate international students in BC has notably increased, while enrolment of those “in developmental programs has remained relatively flat” and were found more likely attending research institutions, rather than teaching universities or colleges (Adamoski, 2015, p. 17). This could be a contributing factor to the sense of belonging among longer-term students. The Integration Challenge also implies that employment opportunities and experience play a large role in international student experiences. This group of learners is “keenly aware of the value of having a Canadian professional network to support them in their job search” (The Integration Challenge: Connecting International, 2015, p. 6). Immigrants, as newly trained subject-matter experts with credentials, may find local community employment opportunities become available and the potential for economic growth and expansion increase. Figure 5 presents the total and percent of participation in international

education across all 4 types of post-secondary schools in BC: colleges, institutes, research universities (RIU), and teaching universities (TIU).

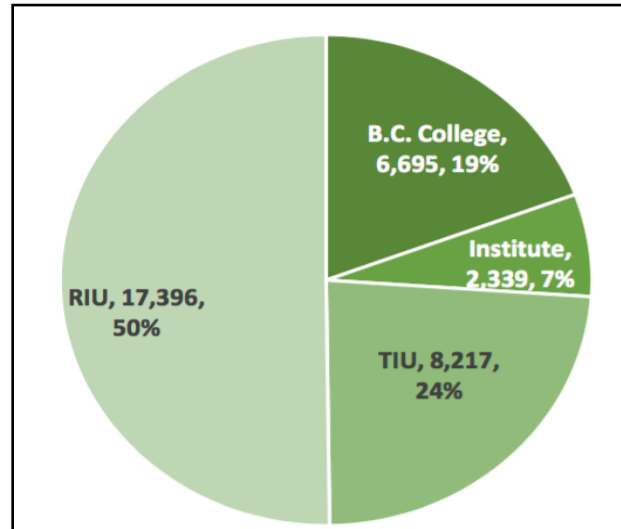


Figure 5. International students in BC by institution type

Social Capital and Social Presence. Social capital is “a value resulting from occupying a particularly advantageous position within a social network” (Gasevic, n.d., p. 1). It is based on trust and relationships built within a social group that share common interests. In education, there is an apparent connection between social capital, program satisfaction and a sense of community. When relating the Community of Inquiry (CoI) model to social capital, social presence plays a unique role. Social presence experiences in an education setting contribute to the development of social capital. Through the CoI model, students integrate learning and knowledge (cognitive presence) with real world experiences (social presence) under the direction of a facilitator (teaching presence) through e-learning. Through social presence, international students feel more connected to their education and environment. This presence is defined as “the ability of learners to project themselves socially and affectively into a community of inquiry” (Rourke et al., 2001, Abstract section). The sense of isolation that international students experience as newcomers,

with little to no social capital, contributes to their lack of sense of community. This affects integration and assimilation. Rourke et al. (2001) point out that “the more individuals know about each other the more likely they are to establish trust, seek support, and thus find satisfaction” in their educational experience (Affected responses section). Social interaction is inclusive of “productive and purposeful collaborative learning activities” and the “development of trust and the sense of community” among international and domestic learners (Gasevic, n.d., p.6). Balancing trust with integration increases social capital and develops social presence. Strong social processes increase the capability of the learner to communicate and collaborate with peers in the in the academic environment. Opportunity for collaboration and cultural experience greatly increase social presence and belonging.

International students gain capital by developing strong social ties between experiences and their community. Thus, shaping their educational experience and desire to acclimatize, and integrate, and make connections with both educational choices and employment opportunities. International students are “ideal immigrants both because of their language ability, and for the recognizable qualifications they will possess upon graduation” as Canadian educated professionals (Kamara, 2017, p. 292). Employment opportunities are open doors for Canadian trained international students. Because of the unique qualities of this group, as experts in their fields, pathways to employment should be developed and implemented from education to local labour markets. **Conclusions**

An online communication and resource toolbox can bring international students closer to their community and foster a sense of belonging. Providing clear pathways to immigration and opportunities for continuous support anywhere, anytime, increases social presence experiences and enables the development of social capital.

Canada's dynamic immigration policies and procedures contribute to the loss of international students initially planning to remain in their province of study and become contributing members of the local community. A Collaboratory of online resources presented in a comprehensive, online toolbox would assist this group and encourage them to follow, or develop, intentions to immigrate. Clear pathways from education to employment through an online support system would aid in the retention of Canadian-trained international students. Leveraging social media further caters to the needs of this group by offering information and collaboration through familiar tools.

Although international students may have a desire for permanent residency, limited support options do not provide scaffolds to develop personal relationships and gain Canadian work experience. Difficulties in obtaining employment, as well as insufficient services for international students, result in a loss of potential for economic growth and retention. An online toolbox responding to the needs of this group brings domestic and international students together to form bonds while leveraging their skills to benefit the local labour market. Matching international students with local employment opportunities strengthens the economy and populates the community with locally educated, permanent residents. The ability to collaborate online with peers, educators and employers can assist in building a strong economic community by transitioning international students from post-secondary education into the Canadian workplace.

The Critical Challenge Question has been informed by this comprehensive literature review and findings will be applied to the Major Project design and development as presented in Ch. 3 of this Process Paper. Through the online toolkit, local communities and employers gain

Canadian-trained graduates as they select personal pathways to immigration and contribute to economic growth in their respective fields of study.

Chapter 3 – Procedures and Methods

Major Project Development

An initial schematic provided guidance to the design on the Pathways2BC website. This assisted the design to remain focused and act as a reference for the build (Appendix A: Schematic). The toolkit intends to guide users towards a common goal: building local community. By implementing elements of collaboration, users can feel closer to their BC communities and benefit from an amalgamation of carefully chosen online tools. The ‘one-stop-shop’ model reduces frustrations in research and knowledge about community and provincial supports by bringing the elements of the three pathways together in one site. Carefully laid out pages are considerate of the various challenges users face within this robust model. The timeline presented a target for the delivery of the Process Paper and Major Project.

Project Timeline

Date	Deliverable
June 15, 2018	Final Literature Review Completed (Chapter 2)
	Chapter 1 under development
	Major Project website build begins
August 31, 2018	Chapter 1 and Chapter 2 complete. Chapter 3 started.
	Major Project website version 1 ongoing

September 30, 2018	Chapter 3 complete
October 15, 2018	Call for Reviewer Field Testing – invitations sent
	Reviewer Field Testing -- collating begins (Chapter 4) Major Project website version 2 revisions start
November 7, 2018	Chapter 4 complete Chapter 5 under development Major Project website version 2 build complete
November 21, 2018	Chapter 5 complete Completed paper sent to Supervisor for final review and sign-off
November 30, 2018	Dean's final sign off of completed paper Transcripts complete

The Pathways

The intention of this Major Project was to provide pathways for international students to remain in BC and become economically contributing residents. Pathways to education, immigration and employment were presented in the online toolkit, providing a comprehensive directory of resources for students, educators and employers, alike. Creating a sense of belonging requires the development of relationships and positive experiences. Equipping international students with the same tools available to their domestic counterparts encourages integration and assimilation. Through findings in the literature review, the primary online pages were developed: Education Pathways, Immigration Pathways, and Employment Pathways.

Research also indicated that a sense of belonging is lacking for this group of students, thus a Google Plus Community (G+) app was implemented through the Collaboratory (Appendix B: G+ Collaboratory Homepage). This app was chosen as it is one of the top five most used apps for international students and the third most used app for those in developmental programs (Figure 6). The G+ Collaboratory space provides opportunities to develop connections between international students, domestic students, and community members. As users are able to post, reply and share, they become more engaged in the community and can make meaningful connections leading to a sense of security. Comfort levels rise through online engagement, making way for relevant employment opportunities. The “importance of reinforcement [through collaboration]” (Rourke et al., 2001, Interactive responses section) is satisfied within the Collaboratory. The ability to post, reply and share in the Collaboratory meets human needs for reward and fosters community. Additional pages provide insight into what BC has to offer as a diverse and dynamic province with potential for economic growth and opportunity.

Additional pages. For new and domestic users, alike, these additional pages showcase what BC has to offer. Through travel tools, information pages and planning sites, users are exposed to beautiful BC. The Maps of BC page presents interactive maps plot post-secondary institutes while the weather map reveals current and trending patterns and local forecasts. Explore BC showcases online tools to familiarize users with BC pastimes and offers local knowledge. Vibrant photos, social media sites and icons paint a picture of popular travel destinations within the province. The Google Calendar app encourages users to collaboratively plan their education experiences and explore BC. Becoming familiar with the province further encourages community and increases opportunities for retention and local employment. Catering to international and domestic students’ tendencies to use social media to research and

communicate the design incorporated various apps familiar to the majority of intended users. The News page offers insight into Canada's expectations, updates on changes in immigration law and policies and procedures. It is presented in an easy-to-read blog format. News is delivered through short, plain language, with opportunities for users to reply and share insight or thoughts.

This project presents a web-based online toolkit with various resources to guide users and address challenges. It also allows for BC-trained international students to navigate through pathways that lead to immigration and local employment. Domestic students, educators and employers are encouraged to use multiple aspects of the toolkit to build local community and assist in the integration and assimilation of BC's diverse population. In order to maintain interest and motivation, various quizzes were uploaded according to relevant subject matter. Local information, such as weather and cultural activities were included, while photos and videos intend to inspire and promote beautiful BC as a destination. Participants are able to learn about post-secondary education options, employment opportunities and Canadian immigration plans in order to make informed decisions and plans through the Pathways2BC online toolkit.

Major Project Considerations

Platform. Various platforms were considered for the web-build. Weebly was chosen to host the Pathways2BC toolkit due to its ability to embed codes for audio-visual elements and apps with ease. The free education builder makes it economically sound and available for the purpose of my Major Project. Weebly's clean design features offer a variety of templates to choose from and manipulate that suit the needs of the site developer. Weebly's colour palate allowed for me to choose a complimentary set of colours to produce pleasing and simple visuals. The various build features allowed me to create a site, develop pages and self-publish with minimal online support. The accessibility of this platform makes it desktop, tablet and, most

importantly, mobile friendly. The Weebly app is a free download to any mobile device, making it available across time and space. Being able to build through the app allowed for changes and edits from anywhere, on any device, throughout the design process. Enge's study reveals that "industry and users alike are getting more comfortable with mobile environments" (2018, Average page views per visit section). He predicts that this trend will continue to increase over time. As the information highway expands and internet access increases globally, convenient mobile access becomes more desirable.

Through Weebly, social media integration was sufficient for this Major Project, considering most international students use "Facebook, YouTube, LinkedIn, Google+ and Twitter" (Adamoski, 2015, p. 23) to search for information on post-secondary institutes and education in BC. Figure 6 presents a breakdown of the various apps commonly used by this group of students. Weebly's interface allowed for a wide range of buttons and links to be added to the sandbox of tools available to users with diverse needs. Encouraging BC students, employers and educators to use the toolkit for the apps alone offers justification for collaboration potential. Although, Weebly's free education account limits access to valuable apps and download features, this platform proved to be superior in its overall User Interface (UI) and the various tools within the kit deliver a satisfactory User Experience (UX).

Navigation and Design

Showcasing the pathways on the Homepage with giant buttons augments usability, while the Collaboratory provides a personal avenue for users to develop connections and build relationships (Appendix C: Homepage). A space for exchange of information between participants with a common interest fosters a sense of community. Using Weebly as the site host enables users to optimally view the toolkit on various devices: desktops, laptops and mobiles.

This effect enables inclusivity, as all participants are able to easily access the online toolkit from any device they choose, direct affecting the efficiency of the site. In design implementation, I integrated two fundamental laws of website design: Fitts and Hick. Integrating Fitts’ and Hick’s laws through Weebly’s platform provides an easy UI platform allowing Pathways2BC to deliver a pleasant and satisfying UX.

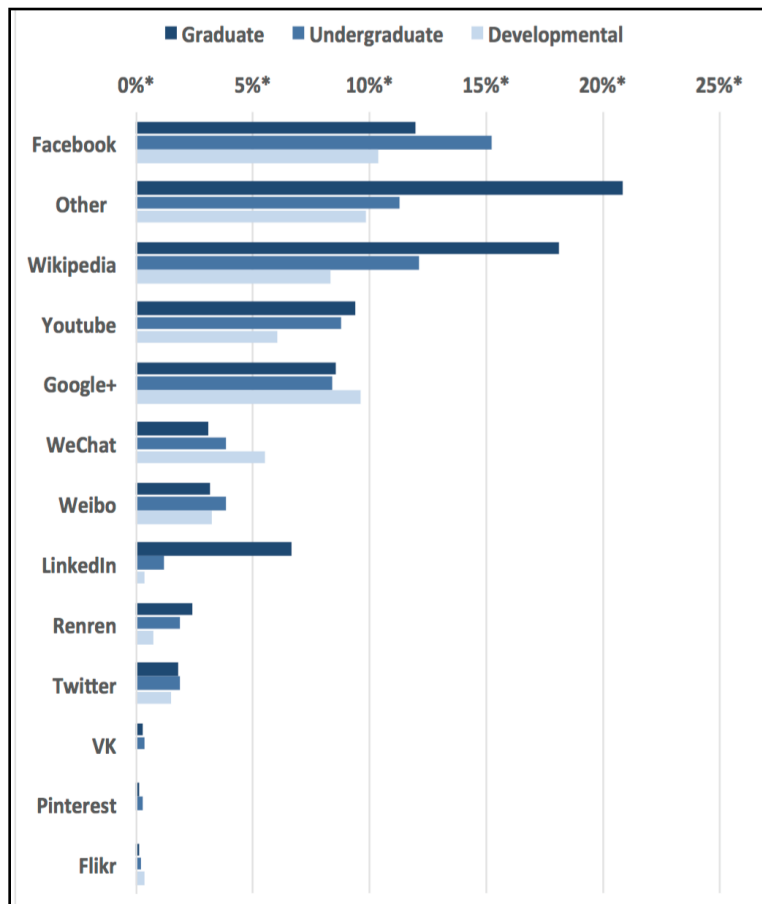


Figure 6. International students’ most used applications

Fitts’ Law. Intended results of use included a clear, efficacious, economical and easy to navigate design. consistency in type face and a complimentary colour palate asset in the intended effects. Adequate use of white space offers visual breaks and diminishes image overload.

Incorporating Fitts' design law by labelling the tools to optimize time and space, each image and button was made 'clickable' across the whole target. The design attempted to "use large objects for important functions ... [and] small objects for [less focused] functions" (Tognazzini, 2014, Fitts's law section). The webpage reads like an app, with limited images and text, maximizing each page without overstimulating the user. Directing the user to the main pages saves time and highlights priority information. Participants can then choose to delve deeper, or remain on the surface. They are not expected to wade through all the content at once. Buttons and captions include "font sizes that are large enough to be readable on standard displays" (Tognazzini, 2014, Readability section). In accordance with Fitts', the distance between targets and size of targets were also considered in order to improve UX throughout all pages.

Hick's Law. According to Hick's, web design should limit objects and links on the Homepage, in particular, in order to direct and guide the user through a natural hierarchy of choices (Soegaard, n.d.). This brings the user to the most important pages first: the three Pathways and the Collaboratory. These pages intend to introduce the overall toolkit and guide the user to personal areas of interest and need. Implementing qualities of visual hierarchy allowed me to highlight text and guide the user through the pages as intended, offering "a line of least resistance" (Tognazzini, 2014, Explorable interfaces section). Successful execution of Hick's law entails "separating the essential material from the secondary" (Soegaard, n.d., The Implementation of Hick's Law section). The online toolkit is explorable, enabling the user to quickly browse the highlighted areas as well as dig deeper if desired. Although users are encouraged to view each page according to preference, Figure 7 reveals the intended pathways through the website.

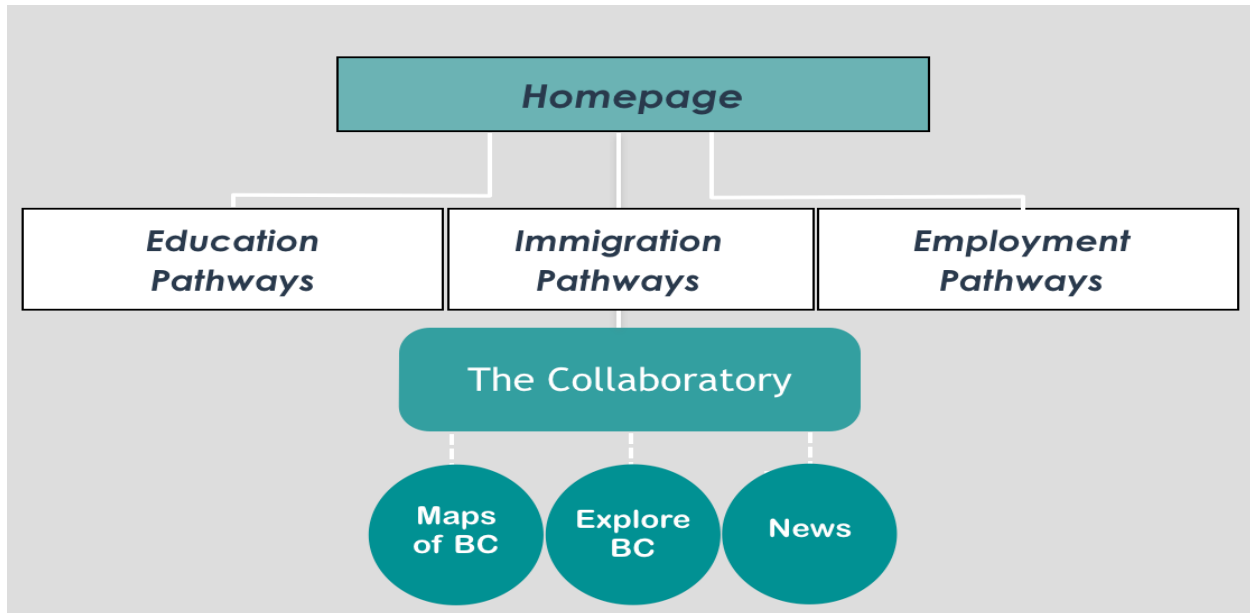


Figure 7. Pathways2BC navigation flowchart

As mobile devices become more prevalent, site accessibility and availability across time and space increase in necessity. The Pathways2BC online toolkit offers support services for international students and other participants across both time and space. Mobile access allows them immediate access to services and tools. The website design incorporates the ‘look and feel’ of a mobile app and delivers satisfaction to the user and provides the desired efficacy. Mobile accessibility and view-ability were optimized in design considerations as “screen size is limited [making it] impractical to display items not currently needed” (Tognazzini, 2014, Discoverability section). Weebly’s themes compliment mobile devices as a continuously emerging preference for the majority of users. As of 2017, “mobile now has more total page views than desktop” (Enge, 2018, Total page views section). This had a substantial effect on the decision to make Pathways2BC mobile friendly and accessible.

Although, the hidden navigation bar limits visible options, Weebly presents a clean display, especially on a mobile device. It also allows for “the user to escape back to the home page (*sic*) [and] makes users feel safe and secure” (Tognazzini, 2014, Explorable interfaces

section). Hovering over the navigation bar reveals all the pages, while the Homepage identifies and clearly displays the intended navigation pathways. The mobile option displays the web pages as a linear list, allowing the user to scroll from top to bottom. This feature further increases UE as it is a familiar function for smaller devices. Upon completion of the site, international and domestic students, educators and local employees provided anonymous feedback via a Google Forms. The findings from the feedback process were applied to the second version of the design of the toolkit and have been detailed in Chapter 4.

Chapter 4 – Field/Beta Testing and Findings

Major Project Implementation and Feedback Processes

Implementation process. Upon completion of Pathways2BC, stakeholders and educators, settlement practitioners and employment consultants, along with VIU faculty and fellow graduate students provided anonymous feedback through a Google Form survey to guide and inform version two of the Major Project. Due to the nature of the feedback questions, no institutional ethical review was required. Participants were presented with questions in order to assess the validity of the Critical Challenge Question; *“How can an online resource toolkit support international learner in the successful transition from post-secondary studies to the Canadian workplace?”* Gleaning opinions and feedback from the anonymous survey allowed for further formative and summative assessment of the first version of the product. The survey was developed through findings in the literature review, along with responses to overall experience and ease of use.

Feedback process. In order to discover what I should include in Pathways2BC to successfully communicate my intentions, I enlisted colleagues and a trusted population to perform initial routine usability trials before formally sending out the survey invitation. My main goal for this strategy was to see if general website users were able to easily locate and learn from the tools presented on various pages. This allowed me to see if an outside group could discover pertinent information and “perform the tasks [I] expect [my] users to perform” (Tognazzini, 2014, Discoverability section). Some of the beta testing included general feedback on colour scheme, layout and text continuity. Minor edits, typos and broken or missing links were rectified in order to prepare the build for the more formalized review, delivered through Google Forms.

This survey initiated concise, multi-faceted responses that guided further edits and developments, informed changes to version two of Pathways2BC.

Google Forms. Field testing through Google Forms (Appendix D: Google Feedback Form— Call for Participation) enabled insight and review opportunities in order to further justify the need for the Pathways2BC online toolkit. Google Forms allowed me to collect and collate data according to anonymous responses. Through multiple choice, checkboxes, linear scales and short answer survey questions, participants were able to input knowledge-based information to corroborate research findings. Aggregated results through automatically created charts and graphs offer cumulative insights into the toolkit as a whole. As presented in Figure 8, results can be displayed in vibrant colours, through a variety of formats.

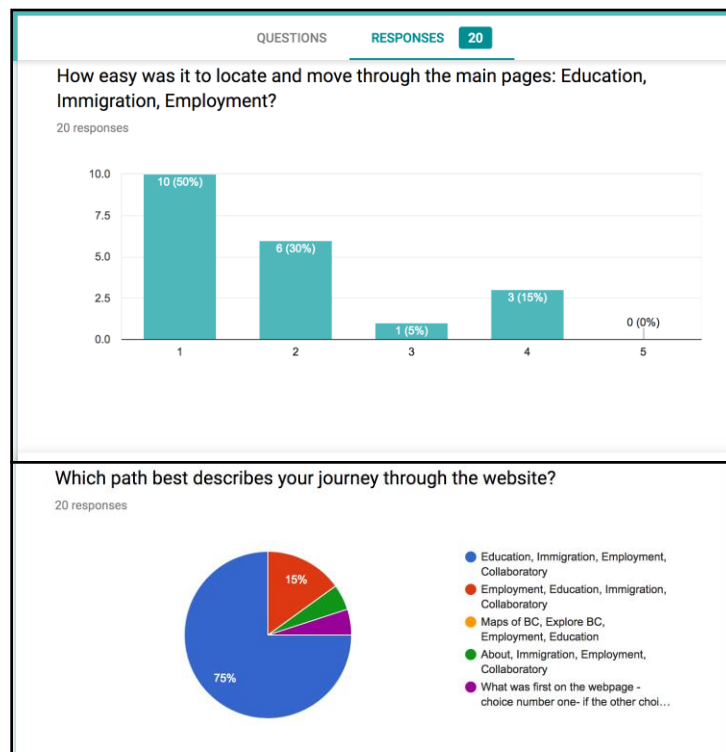


Figure 8. Summary results of a sample of navigation questions

Google Form responses can also be downloaded in a linear Comma-Separated Values (CSV) file, not only allowing research and findings to be amalgamated and cross-referenced, but offering the option to view results in a linear format. All results enabled comparing and contrasting between various test groups and initiated editing according to various needs and details. The ability to insert images and videos for reference makes Google Forms visually stimulating, interactive and engaging. This feature also clarifies and focusses any questions for a core concise response. Requests for anonymous feedback were presented to educators and BC community members through an invitation letter. Stakeholders, settlement practitioners and employment consultants in the non-profit sector contributed professional insight, specifically in regard to the Immigration and Employment Pathways content; OLTD and MEdL graduates and students also participated in the survey as education experts.

Feedback Questions

Assessment of the website was documented through survey results based on four major criteria: Navigation, Content, Design and Usability. Ease of navigation was determined on all devices including, mobile phones, laptops tablets and desktop computers. Content was measured by various survey groups: educators, students, settlement practitioners and the employment sector. Local community members were invited to analyze the presumed effectiveness of this component of the toolkit. All participants offered feedback on the overall UX of the toolkit. A variety of question forms were used to gather, collate and sort data through the lens of individual users with varying backgrounds. Taking into consideration the demanding schedules of participants, required questions were limited to quick responses, while longer answers were optional. Sections elicited responses based on the overall website experience, through specific

questioning in required fields. Optional comments and opinions were encouraged and concluded each section. Participants were recommended to spend five minutes on each section.

Navigation. After the participant indicated what role they played— educator, student, employment consultant or settlement practitioner, they were directed to the first section: Navigation. Initial questions offered a description of the section to guide the responses of the participants: Consider a road map. Is navigation through the website clear? Was it easy to find your way around? The Navigation section offered a variety of required multiple choice questions and concluded with the optional opportunity for feedback space.

1. What device did you use to navigate through the website?
2. How easy was it to locate and move through the main pages: Education, Immigration, Employment?
3. Which path best describes your journey through the website?
4. It was easy to navigate through the website.
5. What changes would you suggest to improve navigation through the website as a whole?

Content. Feedback on overall content was prefaced with two guiding questions: Is information easy to locate? How useful is the site for BC communities? A set of linear scales requested a rating from very informative to uninformative based on the following pages: Education Pathways, Immigration Pathways, Employment Pathways, Maps of BC, Explore BC and News. This section concluded with checkbox questions and an optional long answer space:

1. The Collaboratory is a useful tool to develop a sense of community.
2. Multimedia (YouTube, Questionnaires, Images...) clarified aspects of the content.
3. What would you add, change or remove to make the content more relevant? Refer to specific content and/or pages.

Design. The overall design of the website plays an important role in the survey. This section intended to glean insight on the visual aspects of Pathways2BC regarding layout clarity and clutter. Attempts to make the website comprehensive without overwhelming the reader was a leading motivator for including this section in the survey. The following multiple choice statements intended to elicit feedback on the overall visual design:

1. The graphics added value to the web design.
2. The colour scheme was visually pleasing.
3. The size and shape of buttons and icons was appropriate.
4. Text and font size were appropriate.

This section closed with opportunity to offer suggestions on visual improvement.

Usability. Usability refers mainly to UX. This was measured through responses to two questions and a statement with multiple choice options:

1. How would you rate your overall experience with the website?
2. There was adequate variety and interaction to keep me interested in the website.
3. Were the tools and links accessible on your device?

Additional comments. After completing the four sections, participants were lead to the exit ticket. Before submission, a fifth and final section presented an optional space for participants to leave additional anecdotal comments or suggestions not previously mentioned in the survey. This encouraged respondents to freely include extraneous insight or suggestions for Pathways2BC.

Findings of Field Testing

Results from the survey were collected through 21 respondents who offered feedback and insight based on experience and expertise. Approximately 80% were educators, while the

remaining 20% were from the Employment and Immigration sectors. Even though this was an option, none of the respondents defined their current role as Student. Although positive feedback was plentiful, the constructive criticism and comments were most valuable to the revisions of the Major Project.

Navigation. The option to review the site on a mobile device was give, but all respondents completed the Goggle Forms survey on either a desktop or laptop. Although the majority agreed that locating the main pages was easy, 15% indicated otherwise. Other comments and responses were based on ease of navigation in relation to personal preferences. There were multiple comments related to the hidden navigation bar. One survey participant in particular stated that it took “a few moments to figure out that the 3 horizontal lines in the left hand corner of the screen would show me my options.” Version one of Pathways2BC presented a three-line hamburger menu that opened up options for additional pages. The motivation behind this design was that this “tiny icon takes up a minimal amount of screen real estate” (O’Neill, What is the hamburger menu section, 2016) and allows for a cleaner, less cluttered looking site. Because “it isn’t obvious to all users that the three lines actually are a menu icon” (O’Neill, What is the hamburger menu section, 2016), there were multiple comments regarding the location and visibility of other pages. Figure 9 presents the mobile view in comparison to the desktop or laptop. On the mobile device, the hamburger is visible in the top left corner. On the desktop and laptop, the navigation bar reveals the main pages and a drop-down menu.



Figure 9. Mobile homepage and Desktop homepage navigation design comparison

Some participants requested “a better description to improve navigation” on the homepage. As another response suggested the homepage should address the following questions: “Why am I here, and what do I stand to gain from staying?” Pathways2BC presents a plethora of valuable tools and resources. Without appropriate prefacing throughout the site, users might lose interest and motivation. Directing users through the site with a limited text to page ratio enables the reader in calculating the relevancy of each resource. Plain language also assists users in locating and benefitting from content relevant to their personal needs.

Content. Multiple comments and responses were submitted regarding the content of Pathways2BC. Some of which were useful in guiding and developing ideas for the existing tools; others offered insight and suggestions to new or alternative resources. One comment worth considering addressed the importance of workplace culture. Over 50% of newcomers to Canada lose their first jobs due to a lack of understanding of work place culture in Canada. (Angelika Valchar, personal communication, November 7, 2018). This staggering statistic is worth mentioning. Valchar informed that, because of this, settlement agencies have made efforts to decrease this gap in employment and offer Canadian culture information sessions and workshops to newcomers. As an employment manager for a non-profit organization in BC, she claims that

these sessions are, generally, open to permanent residents, awaiting citizenship. International students may not have access to such services, regardless of their intention to remain in Canada or not. The significance of this statistic is in direct relation to the relevance of the project and addresses the Critical Challenge Question.

Concerning multimedia and interactive elements, respondents, had mixed reviews. Some were intrigued by the interactive maps and YouTube videos. Others “gave pause to the use of the learning preferences quiz.” The intent of the questionnaires was to add a playful aspect to the Education page. In order to maintain attention, I want to appeal to those users who may appreciate some lighter content. Although learning preference quizzes may be entertaining, the survey response revealed that “learning specialists have researched this extensively and find that they aren't as relevant as we thought they were. We now use metacognition as a guide for engaging and enhancing learning.”

Another area of considerable interest were the responses to the Collaboratory. Although none of the participants in the survey disagreed with the intention behind the benefits of using an online forum to develop a sense of community, there were doubts about the presentation and practical use; “who do you hope might use the Collaboratory (love the name)? I always have struggles getting people to engage with G+.” The incentive for this tool is to develop social capital and belonging. For this respondent, the usefulness was unclear. Another comment suggested that the addition of “testimonials from students who have been successful” ... “here in Canada” would bring this tool to life.

Design. From desktops to mobile devices, the landscape of web design has changed. With this in mind design and structure were taken into consideration for the Major Project. The increase in the number of mobile device users in the 21st Century has caused the overall

appearance of websites to have to adjust accordingly. For this reason, Pathways2BC was designed to display on devices with varying capacities and screen sizes. Many reviewers commented on the simplicity of the site with appreciation, but one educator suggested that, although a strong use of ‘clean design’ is preferred over clutter, sometimes this ‘detracts from clarity.’ Conversely, another expressed appreciation for the ‘large buttons’ and ‘clear space’.

A few other comments and responses worth noting are based on the graphics. As previously addressed in the Navigation section, some of this feedback was founded in personal taste. The colour scheme was not pleasing, or a specific icon did not adequately represent the content, for example. Although these comments were not dismissed without thought, most agree that the graphics added value to the overall design, as seen in Figure 10. One comment triggered revisions; “do you think it could be ‘personalized’ in any way to reflect BC and/or Canada- perhaps with graphics or logos?” Limited province-specific images were presented through tools and links on the Explore BC and Maps pages.

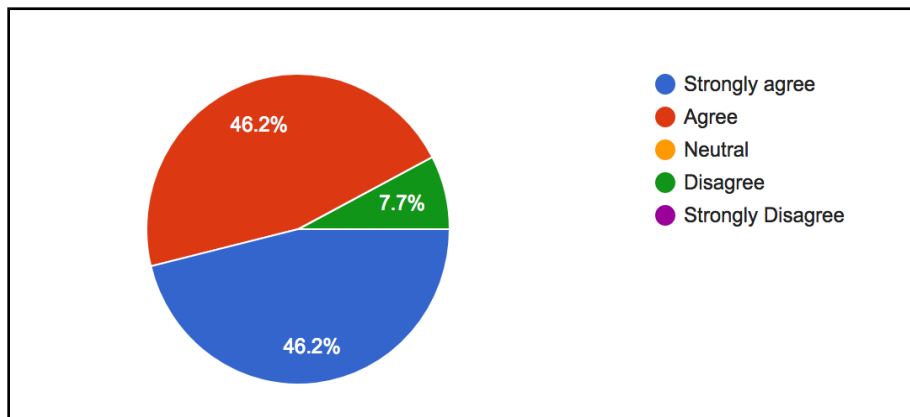


Figure 10. The graphics added value to the web design

Usability. UX is an essential element in developing an appealing web design. If the website does not appeal to the audience, the user can lose interest resulting in navigation away from the site. Therefore, the tools and resources on Pathways2BC need to be relevant and

valuable to the user. Satisfactory UX is initiated in the first few moments the user enters the site. A common thread that addressed UX for the participants of the survey was the apparent ‘government website fee’. This was not my obvious intention, but it seemed to shine through. This is, in fact, an element I was trying to avoid. Considering the intended audience, I chose specific elements that would be familiar and appealing to the target user. Perhaps some of the participants were less engaged in the site because the UX was meant to appeal primarily to students, and secondarily to educators and employers. If a participant isn’t especially interested in the content, UX may decrease, as indicated in Figure 11.

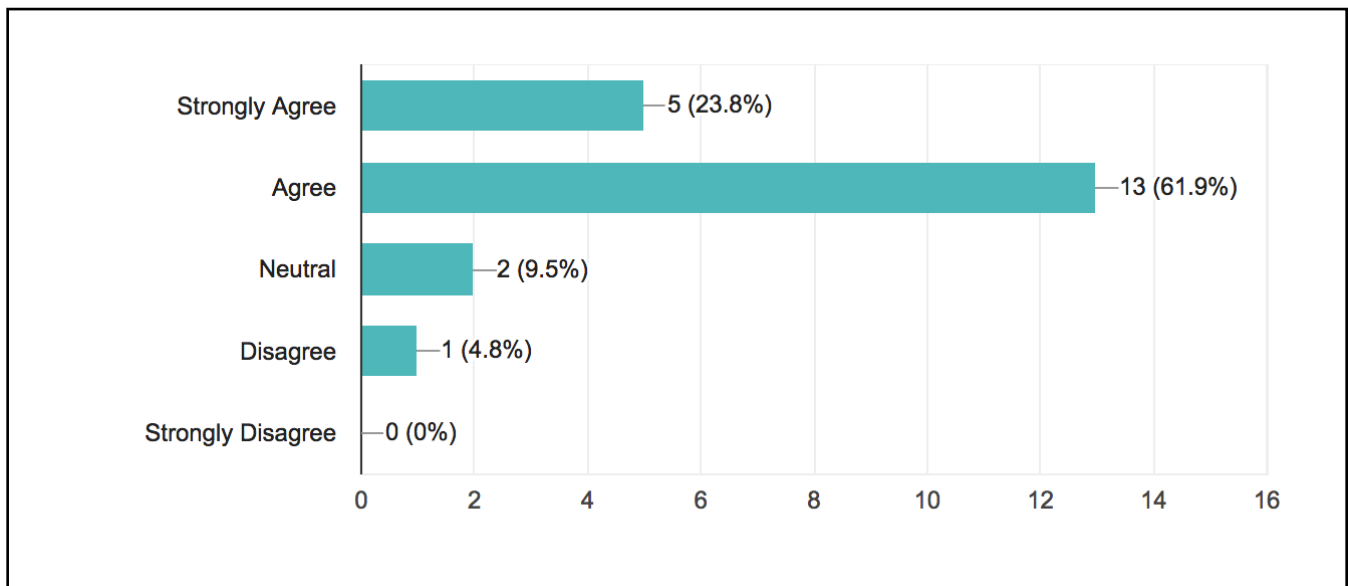


Figure. 11 Adequate variety and interaction to keep me interested in the website

Another comment suggested that the “government website links are very sophisticated” and might be “overwhelming with so many routes to take and so much to learn.” These insights motivated me to develop clear sections and guidelines to address this issue. Although government resources are an integral component to this Major Project, providing clarity and assisting the user in navigating through relevant pathways. The main intention is to lead users to

find direction and learn about local resources in order to leverage their options as residents of BC.

Significance of Findings

Field testing proved constructive and informative. The variety of responses, from accolades to criticisms were instrumental in informing further developments of Pathways2BC. Overall the responses proved useful and insightful. Comments from stakeholders, expert educators, employment consultants and settlement practitioners assisted in delivering pathways and options from post-secondary studies to the Canadian workplace. Version two of the website resource presents a clear cohesion between pages and illustrates the intentions of the various resources. In order to reveal intent without compromising efficacy, the purpose of specific tools and links have been clarified by minimal addition of text. Maintaining efficiency, while contextualizing individual resources, preserves the modesty of the layout. Feedback for further version two revision from field testing findings formed the context for version two revisions as presented in Chapter 5.

Chapter 5 – Conclusions and Recommendations

Conclusions as Applied to the Project Re-Design

Conclusions of the field test findings lead me to adjust navigation throughout Pathways2BC. In consideration of these, I made some changes to the flow and overall appearance of the site. Revisions to the navigation features benefit the overall movement throughout the top level pages. Additional resources and elements have aggregated and completed the resource toolkit. The links and tools across all of the top level pages present a compilation that addresses the Critical Challenge Question as detailed in Chapter 1.

Hamburger icon. One of the main response trends indicated that the navigation pathway was hindered by the ‘hamburger’ menu (three stacked horizontal lines) on the top right corner. Although, the growing popularity of mobile devices, the hamburger icon has increased in use as it is “visually simple, easily explained, and functionally memorable” (O’Neill, Who “invented” the hamburger menu icon? section, 2016). Because the hamburger is commonly considered a place to store more or other information, using it across all devices might have de-emphasized some of the key aspects of Pathways2BC. I decided to reveal the navigation bar on desktops and laptops. This reduces the loss of opportunity for users to navigate through the resources and tools across various pages. Fortunately, viewing the site on a mobile device is not affected by this change, as smaller devices typically have less real estate than larger devices. The Weebly site builder allow for the retention of the hamburger icon in lieu of the navigation bar on mobile devices, as displayed in the Figure 9 comparison. The only concern I experienced was when Pathways2BC opened up through the Internet Explorer browser. The homepage now indicates recommended optimal search engines: Google Chrome or Safari in response to this issue.

Homepage. Because the homepage is the initial landing place for Pathways2BC, it should present the resource expectations and act as a springboard into the site. In order to retain the intentions of the site, I have attempted to make the text “short and snappy to have the optimum impact” (Jo., 2014, How much text is too much? section). The nature of the resource is to allow users to quickly locate relevant information in order to plan their pathways to employment in BC. Heavy text is an obstacle that may cause loss of interest or confusion. The landing page “only need[s] to include the most important information” (Jo., 2014, Organizing your text section). Limited, concise text has benefits in relation to visual and graphical design, but it can also be less informative. In version two, the homepage now offers additional information to help guide the user on the appropriate path and offers insight to each top level page (Appendix C: Homepage). This helps “strengthen [the website] and make[s] a persuasive presentation” (Jo., 2014, The reality section). This strategy focuses on the quality of the text, rather than the quantity. Concise language assets in maintaining the continued interest of the target audience.

Workplace Culture. The results of the anonymous survey revealed that Employment Pathways was missing an integral element: Workplace Culture, as seen in Figure 12. In order to address the needs of the target audience, this is now a subpage under Employment Pathways2BC. This page hosts a series of videos and infographics that offer an interactive insight into intercultural awareness. Visitors to the site can learn about expectations and cultural differences through a variety of multimedia resources. Awareness of Canadian workplace culture armours the target audience with the knowledge necessary to begin their pathways to relevant employment in BC.



Figure 12. Workplace culture page version two

BC brand. Version two of Pathways2BC attempted to develop a stronger BC brand in order to direct the target audience to local provincial resources and links. Although Pathways2BC hosts Canada-wide resources, the initial intention was for retention of Canadian-trained graduates from BC institutes. To give the site a provincial brand, there is now a Beautiful British Columbia page as presented in Figure 13. Maps and Explore resources and tools were moved to subpages as part of the branding process. This move addressed the survey results regarding the relevance of these additional pages. Beautiful British Columbia intends to “sway anyone to settle in British Columbia” as suggested by a survey respondent. To strengthen the brand, images of BC, links and social media buttons were uploaded onto Beautiful BC.



Figure 13. Beautiful British Columbia page version two

Outcome Evaluation

The Major Project achieved its intended outcomes by providing an online resource that encourages the target audience to make connections. Through the three pathways, users make informed decisions on education, immigration and employment according to personal needs. These pathways intended to bridge the gaps in the journey to the Canadian workplace. Employers and educators can be involved in developing a sense of community through recognizing the value of international students. The province benefits economically by encouraging the retention of Canadian-trained graduates. Not only does this group enrich the province's workplace, there are social and cultural benefits that contribute to the retention of international students. Continued support and current information through the resources and tools all in one place contribute to the validity and value of the 'one-stop-shop' design found through Pathways2BC.

Results of Findings in Relation to the Literature Review

Pathways2BC was informed by findings from the Literature Review and applied to the final version two revisions of the Major Project deliverable, along with the survey results. IRCC priorities for retention of international students, post-graduation, were used to present current information on immigration pathways for newcomers. Various paths are presented in order to inform users of Canada's dynamic immigration policies. The online resource showcases the BC Nominee Program as a fast-track option for residents of this province. Through post-graduation work permits, employers assist employees on their journey to permanent residency. Engaging the local labour market, Pathways2BC paves the way to permanency for international students wishing to remain in BC.

Providing the NOC resource alongside the BC employment tool covered both federal and provincial initiatives in relation to immigration and local employment. The target audience uses these tools to guide their intentions and make informed decisions on employment and education pathways. Findings of the Literature Review documented the increasing number of international students trained in Canada and BC and their initial intentions to remain in BC. Links and continued online support, throughout the transitioning process, assist in bridging the gaps from post-secondary to employment. The Major Project leveraged this information by presenting various guides for students, educators and employers to encourage collaboration and connection opportunities.

The Collaboratory page focuses on the need for students, educators and employees to connect throughout the transition from post-secondary to the workplace (Appendix B: G+ Collaboratory Homepage). Intentions to diminish isolation and loneliness by gaining social capital through an online social presence enables the establishment of collaborative relationships. The tools and resources address the unique needs and challenges of international students in Canada as a whole, and offer resources to aid in establishing relevant employment and permanence in BC, specifically.

Limitations of the Project

Canadian immigration policies and procedures are continuously in flux in order to meet the changing and developing needs of newcomers. This affects Pathways2BC in that the information on immigration will need constant updates and revisions in order to remain current and offer up to date information for the reader. This requires invigilation and diligence that I may not be able to consistently provide. Although the intentions are to offer continuous support, this resource asks for constant maintenance and administration. Changes according to dynamic links

and resources necessitate ongoing supervision. The dynamic and transitional nature of social media further limits the mortality of the Major Project.

The Collaboratory, in theory, provides a space for the target audience to meet and develop a sense of belonging. An initial thread, inviting participants to post, might initiate life for this tool. Further research into using online forums to develop community is necessary, as growing social capital online may prove challenging. Although it was considered ‘clever,’ ‘creative’ and a ‘great idea’ by survey respondents, it opens up in a new tab, redirecting users away from the main site. An alternative widget, embedded directly in Pathways2BC, would retain the target audience and contribute to initial intentions in creating a sense of community. As of yet, Weebly has not granted use of this tool in the free education account. Until another option arises, this feature will remain in a G+ Community. Since the G+ Community social network will be closing as of the summer of 2019, other considerations or platforms for collaboration and community will be implemented.

Major Project Recommendations

The next steps for my Major Project involve piloting the resource with current students and local employers, eliciting feedback in partnership with multiple BC post-secondary institutions— both teaching and research institutes. Communicating with local universities and colleges to improve and augment the toolkit to better meet the needs of the target audience requires developing relationships. Since the anonymous feedback revealed that one respondent would “recommend to ... immigrant/international students, to school student advisors, and to other teachers,” perhaps an additional survey for instructors who agree to participate in a second review of version two would inform further revisions. Although developing partnerships with employers and institutes, and revising the current project in order to pilot it to current students

would require further resources. Initial trials could begin with the multicultural societies and their employer contacts throughout BC. Potential growth of the project relies on involving the larger community.

Future endeavours for Pathways2BC would result in the development of an app for mobile devices, in order to reach a larger audience. An app has the potential to load faster, with improved visibility and offline capabilities, benefiting the evolving needs of the target group. This would enable easy dissemination of current information and updates to willing subscribers, through push notifications, for example. Converting the site into an app would make it fully available anywhere, anytime. Leveraging the increase in mobile app use for this target group validates the option of an additional app for Pathways2BC. Cost, maintenance and restrictions to privacy policies would inform progress of the online resource toolkit. Although there are some obstacles for further development, the research and survey responses present future opportunities.

Final Conclusions

As the flow of international students continues to rise in BC, opportunities for the local economy increase. The federal and provincial immigration pathways should recognize these opportunities and pave the way from education to local employment following post-secondary education. Recognition of the value and benefits of this Canadian-trained group have motivated governments to adjust policies and immigration procedures. Providing and presenting a comprehensive toolkit addressed the intentions of this Major Project. Pathways2BC met the expectation of the-Critical Challenge Question through links, resources and online tools; *“How can an online resource toolkit support international learners in the successful transition from post-secondary studies to the Canadian workplace?”*

The online resource was designed to meet the needs of international students and encourage collaboration within the local communities. Research and field testing findings informed the Pathways2BC in version two of the project. Navigation, graphics and content dictate the experiences users have in discovering their individual journeys from education to immigration to employment. Results validated the usefulness of the interactive tools, multimedia and links provided as resources on the site. In order to keep up with the demands of the target audience, continued support and maintenance of the website continue to make it a living resource—relevant to new Canadians in BC intending to work and contribute to the local economy.

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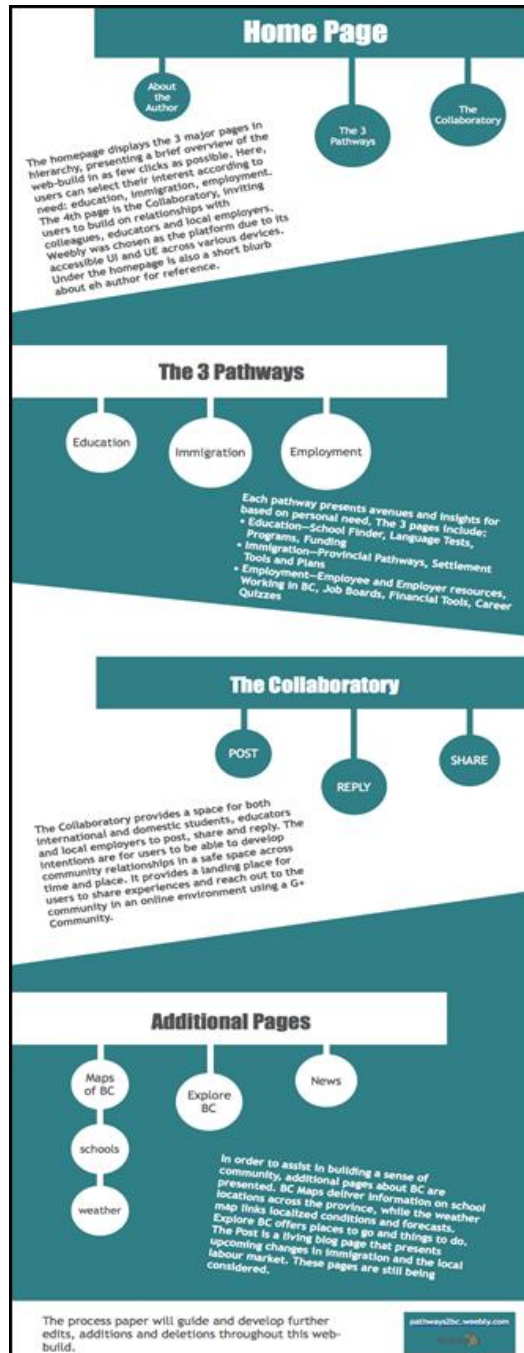
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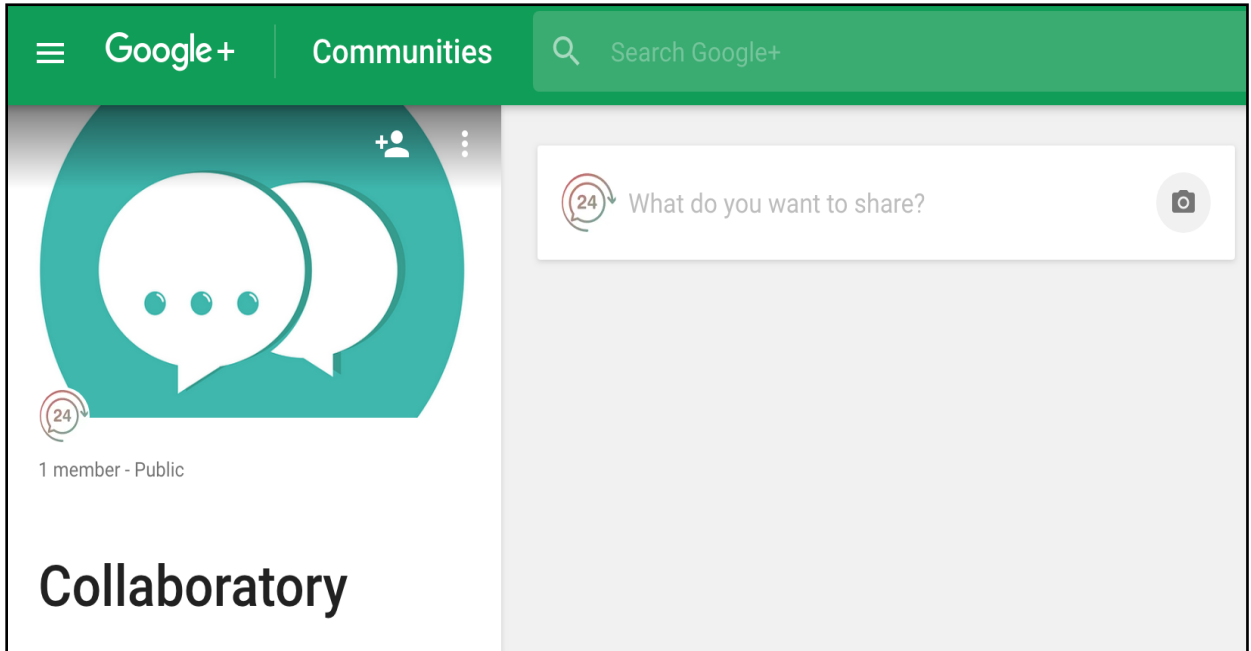
Appendix A

Pathways2BC Web-Build Schematic



Appendix B

G+ Collaboratory Homepage



Appendix C

Homepage


HOME - IMMIGRATION PATHWAYS - EDUCATION PATHWAYS - EMPLOYMENT PATHWAYS - MORE...

Pathways2BC: A Resource Toolkit

Use this resource to successfully transition from Post-Secondary studies to the Workplace. Take the journey through the pathways from education to immigration to employment.

Discover your pathway from education to employment in British Columbia. Click on an icon below to start your journey...*

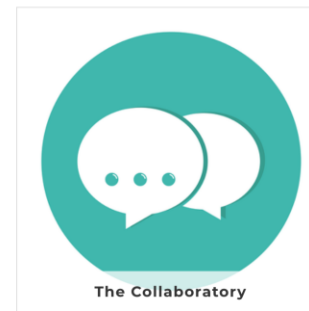
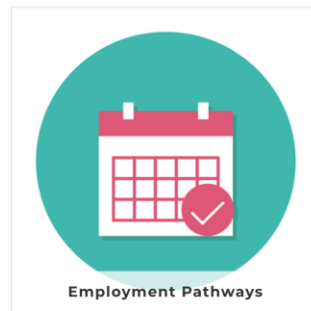
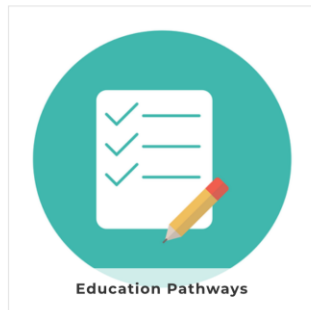


Image Source: Pettycon

*For best results use Chrome or Safari

Appendix D

Google Feedback Form— Call for Participation

Pathways2BC: A Resource Toolkit

How can an online resource toolkit support international learners in the successful transition from post-secondary studies to the Canadian workplace?

* Required



P2BC Discover Your Pathway

Dear Participant,

Thank you for taking the time to participate in this survey.

Please take a few minutes to familiarize yourself with the website and complete the anonymous survey below. Each section should take about 5 minutes. There are 4 sections. I am hoping to begin collating the results by Wednesday, October 24th.

I appreciate your time and contributions to assist in improving the Pathways2BC resource.

You can find the link here: pathways2bc.weebly.com

Sincerely yours,
Corinne Hamel-Taylor