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Research Paper

Culture, Tourism and the Centre for Education Statistics

Characteristics and Labour Market Outcomes of Internationally-educated Immigrants

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Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Acronyms

The following acronyms are used in this publication:

BA	Bachelor of Arts
BArch	Bachelor of Architecture
BCL	Bachelor of Civil Law
BLA	Bachelor of Landscape Architecture
BSc	Bachelor of Science
BSLA	Bachelor of Science in Landscape Architecture
CIP	Classification of Instructional Programs
DDS	Doctor of Dental Surgery
DMD	Doctor of Medical Dentistry
DVM	Doctor of Veterinary Medicine
FCR	Foreign Credential Recognition
HRSDC	Human Resources and Skills Development Canada
JD	Doctor of Jurisprudence
LLB	Bachelor of Laws
MA	Master of Arts
MArch	Master of Architecture
MD	Medical Doctor
MLA	Master of Landscape Architecture
MSc	Master of Science
MSLA	Master of Science in Landscape Architecture
n.e.c.	not elsewhere classified
n.o.s.	not otherwise specified
NOC	National Occupational Classification
NOC-S	National Occupational Classification – Statistics
NR	Non-regulated
PhD	Doctor of Philosophy
R	Regulated
RT	Regulated Trades

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Executive summary

Immigration is an increasingly important component of population growth in Canada, with over 200,000 immigrants arriving in Canada each year. According to a report from Statistics Canada, immigrants were responsible for more than two-thirds (69%) of the population growth that occurred between 2001 and 2006 (Statistics Canada 2007a).

The successful integration of immigrants into the Canadian labour market is of interest to the Canadian public policy and to current and potential immigrants, alike. The purpose of this report is thus to develop a better understanding of the integration of internationally-educated immigrants into the Canadian labour market compared to immigrants who completed their education in Canada and the Canadian-born with a postsecondary education.

Unlike the waves of immigrants who arrived in the 1950s and 1960s, those arriving in Canada since the 1970s have possessed relatively high educational levels. Data from the 2006 Census show that, of the 'very-recent' immigrants – those who immigrated between 2001 and 2006 – slightly more than half (51%) had a university degree. This was more than twice the proportion of degree holders among the Canadian-born population (20%) and much higher than was the case for immigrants who arrived in Canada before 2001 (28%).

Upon their arrival however, internationally-educated immigrants face an adjustment process both in terms of integrating into society at large and finding work related to their field of study. As shown by the 2006 Census, internationally-educated immigrants come from various backgrounds and their labour market outcomes differ from that of their Canada-educated counterparts and the Canadian-born with a postsecondary education. In 2006, about three-quarters of internationally-educated immigrants in the core working-age group of 25 to 64 years old reported being employed, which was lower than the employment rates recorded by their counterparts educated in Canada and the Canadian-born with a postsecondary education, both at about 82%.

As reported in different studies, one important reason for this relative disadvantage is that the skills immigrants have acquired in their home country often are not directly transferable to the host economy. Recognition of foreign credentials, level of educational attainment, extent of experience abroad and within Canada, differences in quality of education across countries, language barriers and related difficulties, varying strength of social networks, knowledge of and information about the Canadian labour market and potential discrimination may also represent some of the factors influencing the labour market outcomes of immigrants compared to those of the Canadian-born with a postsecondary education.

As they integrate into the Canadian labour market, many immigrants initially face difficulties finding employment as well as locating jobs that pay relatively high wages. Many internationally-educated immigrants, especially recent immigrants, engage in further education in order to increase their Canadian education and experience. In 2006, slightly more than one in five (22%) very-recent internationally-educated immigrants reported attending school. In comparison, about 12% of recent immigrants and 7% of established immigrants aged 25 to 64 who had received their education abroad reported attending school in 2006.

Even when working the same number of hours for the same number of weeks, internationally-educated immigrants generally earned less than their counterparts educated in Canada and Canadian-born workers with a postsecondary education. In fact, internationally-educated immigrants who worked on a full-time full-year basis in 2005 had median earnings of $40,800, lower than the median earnings of $49,000 reported by their immigrant counterparts educated in Canada and the $49,300 reported by full-time full-year Canadian-born workers.

As observed by Boudarbat and Chernoff (2009), if one of the main functions of education, obtained either inside or outside the country, is to provide skills that will be used in subsequent employment, then it would be an inefficient use of resources, for both individuals and for society as a whole, not to use these education skills efficiently in the Canadian labour market.

Results from the Census show low education-job match rates among internationally-educated immigrants in 2006. In fact, among the 881,600 internationally-educated immigrants who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the Foreign Credential Recognition (FCR) Program at Human Resources and Skills Development Canada (HRSDC), only about one in five reported working in the best corresponding occupation. This proportion increased to 41% when considering occupations requiring similar or higher skill levels.

The likelihood of working in a corresponding field of study or in an equivalent occupation varies according to period of immigration. About 45% of internationally-educated immigrants established in Canada for more than ten years reported working in the best corresponding occupation or in an equivalent occupation in 2006, compared to about 42% for recent and 34% for very-recent immigrants. However, even after ten years in Canada, internationally-educated immigrants still trailed the education-job match rate of their Canada-educated counterparts and the Canadian-born by more than 15 percentage points.

The analysis finds that the likelihood of having a good education-job match varies by country from which internationally-educated immigrants reported receiving their highest level of education. Overall, more than 60% of internationally-educated immigrants with credentials from Ireland (70%), New Zealand (66%), Israel (64%) and Australia (63%) reported working in their field of study or in an occupation requiring similar or higher skill levels. On the other hand, internationally-educated immigrants with credentials from countries other than Europe, Oceania, North America, and South Africa had education-job match rates below 45% in 2006.

Not all internationally-educated immigrants faced the same barriers and, depending on the particular occupation they had studied for, some were more likely than others to be working in an associated occupation in 2006. Not surprisingly, immigrants who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had higher education-job match rates than those who had studied in a field of study for which this relationship was not as direct.

There is also a relationship between country of education and field of study. More than 90% of immigrants with credentials in medicine from New Zealand, Sweden, Australia, the United States and the United Kingdom reported working as a physician or in an occupation requiring similar or higher skill levels. However, this was the case for less than one-quarter of those with similar credentials from Japan and South Korea. The country of education played a less important role in the case of internationally-educated immigrants with credentials leading to the occupations of chef, cook, hairstylist and barber.

Even with the same educational background and when working on a full-time full-year basis in occupations requiring similar or higher skill levels, internationally-educated immigrants, with earnings of $56,300 in 2005, generally earned slightly less than their Canada-educated counterparts ($59,500) and the Canadian-born with a postsecondary education ($57,200). Not surprisingly, median earnings of full-time full-year internationally-educated immigrants who reported working in the best corresponding occupation or in equivalent occupations were much higher than for those with a poor education-job match rate ($56,300 vs. $34,300).

Among the characteristics associated with an easier transition of internationally-educated immigrants into the Canadian labour market, men were more likely than women to report working in the best corresponding occupation or in equivalent occupations (49% vs. 33%). Differences are also apparent by age, with internationally-educated individuals aged 35 to 44 and 45 to 54 finding higher match rates than their counterparts in the younger and older age groups (25 to 34 and 55 to 64).

Phase 2 of this research, which will follow later in 2010, will explore in more detail the characteristics and determinants that are associated with an easier transition of internationally-educated immigrants into the Canadian labour market.

Introduction

The successful integration of immigrants into the Canadian labour market is of interest to the Canadian public policy and to current and potential immigrants, alike. The purpose of this report is thus to develop a better understanding of the integration of internationally-educated immigrants into the Canadian labour market compared to immigrants who completed their education in Canada and the Canadian-born with a postsecondary education.

Immigration is an increasingly important component of population growth in Canada, with over 200,000 immigrants arriving in Canada each year. According to a report from Statistics Canada, immigrants were responsible for more than two-thirds (69%) of the population growth that occurred between 2001 and 2006 (Statistics Canada 2007a).

Immigrants make an enormous contribution to the pool of individuals in Canada with postsecondary qualifications. Data from the 2006 Census show that, of the 'very-recent' immigrants – those who immigrated between 2001 and 2006 – 349,800, or 51%, had a university degree. This was more than twice the proportion of degree holders among the Canadian-born population (20%) and much higher than was the case for immigrants who arrived in Canada before 2001 (28%). According to the 2006 Census, the 23% of Canadians aged between 25 and 64 who were born outside Canada accounted for nearly one-half (49%) of the doctorate holders in Canada and for 40% of adults with a master's degree (Statistics Canada 2008a).

Upon their arrival however, internationally-educated immigrants face an adjustment process both in terms of integrating into society at large and finding work related to their field of study (Boyd and Schellenberg 2007, Schellenberg and Maheux 2007, Bonikowska, Green and Riddell 2008, Statistics Canada 2005, Statistics Canada 2008b). Boyd and Schellenberg (2007) observed that individuals educated in Canada have followed recognized programs of study, have validated work experience and have a greater familiarity with the language of employment in Canada. Immigrants, on the other hand, are more likely to possess foreign credentials and work experience and, as a result, often face challenges in having their degrees, work experience and/or language proficiency recognized.

Furthermore, immigration policies and occupational certification or licensure processes may not always work in harmony, creating barriers to immigrants' integration into Canadian society and economy, thus generating a paradox: while highly-educated immigrants are recruited on the basis of their potential contribution to Canadian society, the Canadian certification and licensure requirements they must meet often limit the full utilization of their skills (Boyd and Schellenberg 2007).

It is important to note at the outset that the analysis discussed in this report is descriptive in nature, presenting a profile, based on data from the 2006 Census, of the socio-demographic characteristics of immigrants to Canada who have a postsecondary education and making comparisons to the Canadian-born with a postsecondary education, whether completed in Canada or abroad. As such, care should be taken in making interpretations based on the findings. While various studies have proposed competing explanations of the observed differences, the extent to which each factor contributes to immigrant disadvantage has been debated. This report shows that among immigrants, differences in labour market outcomes also exist between those who were educated outside Canada and those who completed their postsecondary education in Canada.

The next stage of the analysis, which will be discussed in a separate report, will examine the interrelationships between factors in a multivariate framework. This will allow an assessment of the contributions of various factors to the integration of internationally-educated immigrants into the Canadian labour market.

This report is divided into four main sections. Section 1 presents a socio-demographic profile of internationally-educated immigrants with a postsecondary credential upon their arrival in Canada. It includes information on their sex, age, time elapsed since landing, marital status, family composition, province and city of residence, country of birth, country of education, level of education, attendance at school, instructional program, mother tongue and ability to conduct a conversation in at least one of the official languages, visible minority group and citizenship.

Sections 2 and 3 focus on the integration of internationally-educated immigrants into the Canadian labour market. Compared to their counterparts with a postsecondary credential earned in Canada or to the Canadian-born with a postsecondary education, what are their working conditions and earnings? Are they working in an occupation related to their field of study and, if not, are they working in an occupation requiring a lower skill level? Different aspects are taken into account when examining labour market outcomes of internationally-educated immigrants. These include the time elapsed since landing, type of credential, country of education, province, sex and age.

Sections 4 presents the summary and concluding remarks.

Identification of the characteristics associated with, and determinants of, the successful integration of internationally-educated immigrants into the Canadian labour market provides important information to the various stakeholders interested in immigration policy. These aspects will be examined more closely in a later report.

Data source – Statistics Canada's 2006 Census of Population

Statistics Canada conducts the Census of Population in order to develop a statistical portrait of Canadian residents on one specific day. The Census is designed to provide information about people and housing units in Canada by their demographic, social and economic characteristics.

Census questions relating to education changed substantially between 2001 and 2006, to reflect developments in Canada's education system and take better account of characteristics of immigrants' education. These changes improved the quality of data and provided more precise information on educational attainment as well as fields of study. For the first time, Census information is available on the province, territory or country in which individuals attained their highest level of education. While this new information is central to the purpose of this report, the analysis will draw additional benefits from the extensive amount of information the Census collects on area of residence in Canada, characteristics of immigrants (sex, age, language, marital status, family composition, country of origin, immigrant status, period of immigration, citizenship, ethnic origin) and labour market situation.

Unless otherwise stated, all data in this release come from Statistics Canada's 2006 Census of Population. Since data from the Census are randomly rounded to the nearest 0 or 5, not all numbers will add to totals and there may be slight differences between tables.

Profile of internationally-educated immigrants aged 25 to 64

Achieving Canada's full economic potential requires that immigrants are able to use their skills and experience in the Canadian labour market. As a starting point in understanding the integration of internationally-educated immigrants into the Canadian labour market, it is important to learn more about the size and characteristics of this population compared to immigrants who completed their education in Canada and the Canadian-born with a postsecondary education.

Given the purpose of this report, which is to develop a better understanding of the integration of internationally-educated immigrants into the Canadian labour market, the population of study has been limited to people in the core working-age group of 25 to 64 as these individuals are more likely to have completed their postsecondary education and be available for full-time work and less likely to have entered retirement than those aged 15 to 24 or 65 and older.

Distribution

In Canada, there were 17.4 million individuals aged 25 to 64 in 2006, representing about 56% of the Canadian population and about 81% of the Canadian labour force during that year. As shown in Table 1, of these 17.4 million, about one in four (or 4.1 million) reported being landed immigrants. The vast majority (70% or 2.8 million out of 4.1 million) reported being in Canada for more than ten years (established immigrants), while the remaining 30% (1.2 million out of 4.1 million) reported being either in Canada for five years or less (very-recent immigrants) or in the country from six to ten years (recent immigrants).

Table 1

Distribution of individuals aged 25 to 64 by postsecondary education status, immigrant status, period of landing and location of study, Canada, 2006

		With postsecondary education			
	All individuals	All individuals	Internationally-educated	Canada-educated	Without postsecondary education
Immigrant status	number				
Total	**17,382,115**	**10,541,860**	**1,649,965**	**8,891,900**	**6,840,250**
Canadian-born	13,148,925	7,784,240	154,915	7,629,325	5,364,685
Immigrants	4,076,700	2,643,895	1,399,010	1,244,890	1,432,805
Very-recent immigrants	681,860	516,700	450,045	66,655	165,165
Recent immigrants	556,565	391,405	288,775	102,625	165,165
Established immigrants	2,838,275	1,735,800	660,190	1,075,605	1,102,480
Non-permanent residents	156,485	113,725	96,035	17,685	42,760

Source: 2006 Census of Population, Statistics Canada.

Immigrant status and 'period of landing'

Non-immigrants or '**Canadian-born**' are persons who are Canadian citizens by birth.

Immigrants are persons who are, or have ever been, landed immigrants in Canada (includes immigrants who landed in Canada prior to Census Day, May 16, 2006).

Very-recent immigrants or '**newcomers'** are persons who have been landed immigrants to Canada for five years or less. In this study, it refers to those who arrived in Canada after 2000.

Recent immigrants are persons who have been landed immigrants to Canada for six to ten years. In this study, it refers to those who arrived in Canada from 1996 to 2000.

Established immigrants are persons who have been landed immigrants to Canada for more than ten years. In this study, it refers to those who arrived in Canada before 1996.

Non-permanent residents are persons from another country who, at the time of the Census, held a Work or Study Permit, or who were refugee claimants.

A large proportion of immigrants reported having completed a postsecondary education. Results from the Census show that of the 4.1 million immigrants aged 25 to 64 in 2006, about two-thirds (or 2.6 million) reported having completed a postsecondary certificate, diploma or degree, compared to 59% of their Canadian-born counterparts (Table 1).

Although a large proportion of highly-educated immigrants reported completing their education in Canada, most did not, particularly those who landed within the past ten years (i.e., very-recent and recent immigrants). In fact, as shown in Table 1, of the 2.6 million immigrants aged 25 to 64 who reported having a postsecondary certificate, diploma or degree in 2006, slightly more than half (53% or 1.4 million) reported completing their highest education outside Canada.

Completion of postsecondary education outside Canada was particularly true for very-recent and recent immigrants. In fact, while about 87% of the 516,700 very-recent immigrants with postsecondary education and 74% of the 391,400 recent immigrants with a postsecondary education reported completing their certificate, diploma or degree outside the country, this was the case for about 38% of the 1.7 million immigrants with postsecondary education established in the country for more than ten years (Table 1).

Location of study

Internationally-educated includes all individuals aged 25 to 64 who completed their highest level of education (i.e., certificate, diploma or degree) 'outside Canada,' while **Canada-educated** includes all of those who reported completing their education 'in Canada.'

See Appendix 1 to view the detailed grouping of regions and countries of highest postsecondary education.

These 1.4 million internationally-educated immigrants aged 25 to 64 represent the main population of reference for the present analysis and are distributed as follows: 450,000 are very-recent immigrants, 288,800 are recent immigrants and 660,200 are established immigrants (Table 1). In the subsequent sections, the socio-demographic characteristics and labour force outcomes of internationally-educated immigrants are compared to other immigrants who completed their education in Canada and to the Canadian-born with a postsecondary education (i.e. either educated in Canada or abroad).

Socio-demographic characteristics

Sex and age

Similar to what is observed for the Canadian population in general, about half of the core working-age internationally-educated immigrants were women. Only slight variations occur in the proportion of women who were internationally-educated, by period of arrival, at 51%, 50% and 49% for very-recent, recent and established immigrants, respectively (Table 2).

Table 2

Sex and age distribution of individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, Canada, 2006

	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**7,784,240**	**1,244,890**	**1,399,010**	**450,045**	**288,775**	**660,190**
Sex						
Women	3,979,765	628,265	698,460	230,830	143,630	324,000
Men	3,804,475	616,615	700,550	219,210	145,150	336,195
Age groups						
25 to 34	2,043,875	307,785	242,450	170,695	50,175	21,585
35 to 44	2,232,815	368,450	463,645	188,515	134,350	140,790
45 to 54	2,130,465	313,580	388,325	71,720	82,030	234,575
55 to 64	1,377,090	255,070	304,590	19,115	22,220	263,250

Source: 2006 Census of Population, Statistics Canada.

As shown in Table 2, 61% of the core working-age immigrants who obtained their highest education outside the country were aged 35 to 54 in 2006, a slightly higher proportion than among Canada-educated immigrants (55%) and the Canadian-born with a postsecondary education (56%). At 22%, internationally-educated immigrants were also more likely than their Canada-educated counterparts (20%) and the Canadian-born with a postsecondary education (18%) to have a larger proportion of individuals in the pre-retirement age bracket of 55 to 64. Conversely, while 25% of Canada-educated immigrants and 26% of the Canadian-born were between the ages of 25 to 34, this was the case for 17% of internationally-educated immigrants (Table 2).

Marital status and family composition

According to the 2006 Census, a majority of internationally-educated immigrants aged 25 to 64 reported being married. At 80%, internationally-educated immigrants in the core working-age group were more likely than their Canada-educated counterparts (62%) to report being married. This compares to about 54% for the Canadian-born with a postsecondary education (Table 3).

Table 3

Marital status and family composition of individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, Canada, 2006

	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Total	**7,784,240**	**1,244,890**	**1,399,010**	**450,045**	**288,775**	**660,190**
Marital status						
Divorced	805,725	114,700	87,080	15,065	14,640	57,375
Married[1]	4,215,970	769,905	1,111,760	366,715	239,175	505,860
Separated[2]	275,855	49,175	42,780	10,290	8,390	24,095
Single[3]	2,384,990	294,885	136,700	54,890	24,085	57,725
Widowed	101,700	16,220	20,695	3,080	2,480	15,135
Family composition						
Married or common-law couple without children	2,075,045	259,330	286,170	93,320	38,015	154,835
Married or common-law couple with children	3,670,510	667,200	871,270	281,755	209,305	380,205
Lone-parent family	626,145	129,360	83,185	18,450	16,490	48,250
Not part of a census family	1,412,535	188,995	158,385	56,515	24,965	76,910

1. Married category includes individuals who reported being legally married and not separated.
2. Separated category includes individuals who reported being separated, but still legally married.
3. Single category includes individuals who reported being never legally married.

Source: 2006 Census of Population, Statistics Canada.

As shown in Table 3, about 62% of internationally-educated immigrants aged 25 to 64 reported living in a married or common-law family with children in 2006. According to the 2006 Census, there was greater similarity in the type of family arrangement between the Canadian-born with a postsecondary education and immigrants educated in Canada than for those educated abroad. In fact, while there was a 15 percentage-point difference between internationally-educated immigrants and the Canadian-born living in a traditional-type family with children (62% vs. 47%), this difference decreased to 7 percentage points in the case of those educated in Canada (at 54%).

Province of residence

As shown in Table 4, the large majority of immigrants aged 25 to 64 reported living in the three most populated provinces — Ontario, British Columbia and Quebec. These three provinces alone were the home of 87% of internationally-educated immigrants, similar to the proportion of immigrants educated in Canada (86%) and considerably higher than the proportion of the Canadian-born with a postsecondary education (74%).

Table 4

Province of residence of individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, 2006

Province	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Canada	**7,784,240**	**1,244,890**	**1,399,010**	**450,045**	**288,775**	**660,190**
Atlantic Provinces	683,880	21,075	18,110	5,285	2,510	10,310
Newfoundland and Labrador	154,230	2,190	2,175	555	335	1,290
Prince Edward Island	39,870	1,060	940	330	115	495
Nova Scotia	284,570	11,320	10,190	2,845	1,435	5,905
New Brunswick	205,200	6,510	4,805	1,555	630	2,620
Quebec	2,218,520	182,205	196,115	83,135	32,855	80,130
Ontario	2,593,390	679,360	756,320	232,695	164,730	358,890
Prairies	1,350,485	150,080	159,340	54,845	27,760	76,735
Manitoba	263,890	28,760	27,905	10,320	4,010	13,585
Saskatchewan	240,945	9,500	9,510	2,810	1,595	5,095
Alberta	845,650	111,820	121,925	41,715	22,155	58,055
British Columbia	911,180	210,550	267,395	73,640	60,630	133,120
Territories	26,795	1,615	1,735	435	290	1,010

Source: 2006 Census of Population, Statistics Canada.

Results from the 2006 Census show that 87% of very-recent internationally-educated immigrants settled in these three provinces upon their arrival in Canada. This is similar to the 89% observed for recent immigrants and the 87% observed for immigrants established in the country for more than ten years (Table 4).

Ontario: Province of choice for more than half of very-recent internationally-educated immigrants aged 25 to 64

At 52%, Ontario was the province of choice for more than half of the internationally-educated immigrants aged 25 to 64 who arrived in Canada between 2001 and 2006. This was slightly lower than the 57% observed for recent immigrants and similar to the 54% observed for core working-age immigrants established in the country for more than ten years (Table 4).

Quebec: Province with the second-highest share of internationally-educated in the core working-age group who arrived in Canada in the past five years

As shown in Table 4, at 19%, Quebec ranked second in terms of the share of very-recent internationally-educated immigrants in the core working-age group of 25 to 64. Results from the 2006 Census also indicated that, although a larger proportion of internationally-educated immigrants settled in Quebec upon their arrival in the country, a large proportion moved to another province after a few years. In fact, the province of Quebec dropped to third position behind Ontario and British Columbia in terms of its share of internationally-educated immigrants established in Canada for more than five years. In 2006, about 11% of recent immigrants and 12% of established immigrants reported living in Quebec in 2006 (Table 4).

British Columbia: Province with the third-highest share of very-recent internationally-educated immigrants aged 25 to 64

In contrast, although British Columbia ranked third in terms of the share of very-recent internationally-educated immigrants (at 16%), following Ontario (52%) and Quebec (19%), a large proportion of internationally-educated immigrants moved to this province after a few years in Canada. In fact, in 2006, British Columbia ranked second after Ontario in terms of its share of recent and established immigrants, at 21% and 20%, respectively (Table 4).

The Prairies: Alberta was the province of choice for a majority of very-recent internationally-educated immigrants aged 25 to 64 who decided to settle in the Prairies

As shown in Table 4, Alberta was the province of choice for a majority of very-recent internationally-educated immigrants aged 25 to 64 who decided to settle in the Prairies. About 9% of internationally-educated immigrants established in the country for five years or less reported living in Alberta and slightly more than 2% reported living in Manitoba. With less than 1%, Saskatchewan had the lowest share of internationally-educated newcomers aged 25 to 64 among the Prairie Provinces in 2006.

Atlantic Provinces: Less than 2% of very-recent internationally-educated immigrants aged 25 to 64 reported living in the Atlantic Provinces

Similar to what was observed for recent and established immigrants educated abroad, less than 2% of very-recent internationally-educated immigrants reported living in the Atlantic Provinces in 2006. At 54%, Nova Scotia was the province of choice for a majority of very-recent internationally-educated immigrants who decided to settle in the Atlantic Provinces. This was followed by New Brunswick (29%), Newfoundland and Labrador (11%) and Prince Edward Island (6%) (Table 4).

Territories: Few foreign-born in the North

According to the Census, only about 1,735 internationally-educated immigrants in the core working-age group of 25 to 64 resided in the territories in 2006, representing about 0.1% of the total internationally-educated immigrant population of this age group in the country (Table 4).

City of residence

Unlike immigrants who arrived a century ago in search of good farmland, today's immigrants are mostly city dwellers. In fact, they are much more likely to live in a metropolitan area than the Canadian-born population (Statistics Canada 2007a).

As shown in Table 5, a vast majority of internationally-educated immigrants in the working-age group of 25 to 64 chose city life. In 2006, about 95% of internationally-educated immigrants and 98% of very-recent immigrants aged 25 to 64 reported living in urban areas. This compares to about 79% for the Canadian-born with a postsecondary education. Conversely, only 5% of the internationally-educated immigrant population lived in a rural area in 2006, compared with 21% of the Canadian-born with a postsecondary education.

Geographical location

An **urban area** has a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometre, based on the current census population count. On-reserve census subdivisions (CSDs) are excluded from this category.

A **census metropolitan area (CMA)** is a large urban area and has a population of at least 100,000.

Urban/non-census metropolitan areas are smaller urban areas with a population of less than 100,000.

Rural areas, on the other hand, include remote and wilderness areas and agricultural lands, as well as small towns, villages and other populated places with a population of less than 1,000. On-reserve CSDs are excluded from this category.

Table 5

Geographical location of individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, 2006

Geography	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
	number					
Canada	**7,784,240**	**1,244,890**	**1,399,010**	**450,045**	**288,775**	**660,190**
Urban/Rural Areas						
Urban Areas	6,119,145	1,161,335	1,330,540	438,835	279,565	612,140
Rural Areas	1,665,095	83,555	68,470	11,205	9,210	48,055
Census Metropolitan Areas/ Census Agglomerations/Other						
Census Metropolitan Areas (CMAs)	5,159,200	1,126,470	1,297,155	427,590	274,255	595,315
Census Agglomerations (CAs)	1,121,290	58,555	48,585	12,120	7,000	29,460
Other (Non CMAs or CAs)	1,503,750	59,865	53,265	10,330	7,515	35,420
Top 5 CMAs of residence						
Toronto	828,260	453,180	564,730	183,715	129,105	251,905
Vancouver	408,675	153,010	217,205	64,135	53,615	99,455
Montreal	980,665	157,815	170,830	73,260	28,565	69,005
Calgary	288,990	51,700	65,850	24,645	13,030	28,175
Ottawa-Gatineau	333,330	54,480	46,595	13,730	10,525	22,335

Source: 2006 Census of Population, Statistics Canada.

Cities with populations of more than 100,000 (i.e., census metropolitan areas) attracted most immigrants. In fact, while 93% of the internationally-educated immigrants aged 25 to 64 reported living in these large cities in 2006, this was the case for 66% of the Canadian-born with a postsecondary education (Table 5).

Canada's three largest census metropolitan areas — Toronto, Vancouver and Montreal — were home to 952,800 internationally-educated immigrants in the core working-age group of 25 to 64 in 2006, accounting for 68% of Canada's total foreign-born population in this age group who reported having completed their postsecondary education outside the country. In contrast, these three census metropolitan areas were home to 29% of the Canadian-born population with a postsecondary education (Table 5).

Country of birth

Internationally-educated immigrants in the core working-age came from many countries — more than 200 countries in total — according to a recent study on immigrants by Statistics Canada (Statistics Canada 2007a).

As shown in Table 6, six of the top ten source countries for very-recent and recent internationally-educated immigrants were in Asia (see Appendix 2 to view the detailed grouping of regions and countries of birth). The People's Republic of China represented the leading source country for internationally-educated immigrants aged 25 to 64 who arrived in Canada in the 1996 to 2006 period (16%), followed by India (12%), the Philippines (9%), Pakistan (5%), South Korea (3%) and Iran (3%). These six countries alone accounted for just slightly less than half (48%) of all very-recent and recent internationally-educated immigrants in the core-working age in Canada in 2006.

Table 6

Top 20 source countries of birth for internationally-educated immigrants aged 25 to 64 by period of landing, Canada, 2006

	Internationally-educated immigrants			
	All	Very-recent	Recent	Established
Country of birth	number			
All countries of birth	**1,399,010**	**450,045**	**288,775**	**660,190**
Total 20 top countries of birth	**972,080**	**318,210**	**214,335**	**439,540**
India	142,965	55,325	33,390	54,245
People's Republic of China	141,840	72,745	43,495	25,595
Philippines	131,555	39,485	24,320	67,745
United Kingdom	90,310	11,295	6,965	72,055
Pakistan	48,835	22,645	16,610	9,580
United States	48,100	9,855	5,375	32,870
Poland	46,635	2,650	2,655	41,330
Romania	37,010	16,485	8,535	11,990
South Korea	36,180	15,365	9,890	10,930
Special Administrative Region of Hong Kong	34,990	1,660	6,605	26,725
Iran	30,655	12,235	8,920	9,495
Russian Federation	28,610	11,395	11,125	6,095
France	25,775	8,955	4,855	11,970
Taiwan	22,655	4,315	9,025	9,315
Germany	20,630	3,045	2,920	14,670
Ukraine	20,530	8,420	7,275	4,830
Sri Lanka	18,125	4,705	3,835	9,585
Lebanon	16,480	4,520	1,890	10,075
Algeria	15,620	9,575	3,880	2,165
Egypt	14,580	3,535	2,770	8,275
Other countries of birth	**426,935**	**131,835**	**74,440**	**220,650**

Source: 2006 Census of Population, Statistics Canada.

Although the number of immigrants from Europe declined over the years, at 21%, they still made up the second-largest group of very-recent and recent internationally-educated immigrants to Canada, after Asia (at 61%). Eastern Europe accounted for about 57% of these very-recent and recent European immigrants in the core working-age category.

The three most common European countries of origin for the very-recent and recent internationally-educated immigrants to Canada were Romania, the

United Kingdom and the Russian Federation, each at about 3% (Table 6). This represented a change over the decades among European-born immigrants. Formerly, most newcomers came from the United Kingdom, Italy, Germany, the Netherlands and Portugal (Statistics Canada 2007a).

Country of education

The source of immigration to Canada has changed substantially since the 1970s due to a number of factors, such as changes in Canada's immigration programs to build on social, humanitarian and economic goals, and international events affecting the movements of migrants and refugees. As a result of these changes, the proportion of the foreign-born population who were born in Asia (43%) surpassed the proportion born in Europe (32%) for the first time in 2006 (Statistics Canada 2007a).

As shown in Table 7, the top five countries in which very-recent and recent internationally-educated immigrants completed their postsecondary education were very similar to the countries from which these individuals immigrated during that same period: the People's Republic of China, India, Philippines and Pakistan (see Appendix 1 to view the detailed grouping of regions and countries of highest postsecondary education). Also included in the list of the top five countries is the United States, indicating that many very-recent and recent immigrants first completed postsecondary studies in the United States before immigrating to Canada.

Table 7

Top 20 source countries of education for internationally-educated immigrants aged 25 to 64 by period of landing, Canada, 2006

	Internationally-educated immigrants			
	All	Very-recent	Recent	Established
Country of education	number			
All countries of education	**1,399,010**	**450,045**	**288,775**	**660,190**
Total 20 top countries of education	**1,021,090**	**329,255**	**220,215**	**471,620**
India	137,660	54,535	32,760	50,370
Philippines	132,540	39,755	24,560	68,225
China, People's Republic of China (including China)	122,295	68,260	37,980	16,060
United Kingdom	119,390	16,680	11,430	91,280
United States of America	103,695	22,185	15,945	65,570
Pakistan	46,285	21,200	15,155	9,925
Poland	46,080	2,690	2,730	40,660
France	36,205	12,690	7,015	16,500
Romania	36,130	16,320	8,415	11,390
South Korea (including Korea)	33,325	14,030	9,345	9,950
Special Administrative Region of Hong Kong	30,710	1,615	5,925	23,165
Russian Federation	30,475	12,140	11,485	6,855
Iran	24,650	11,015	7,300	6,335
Germany	22,840	3,955	3,690	15,200
Taiwan	21,500	3,695	7,990	9,820
Ukraine	20,475	8,550	7,375	4,545
Egypt	14,825	3,650	3,130	8,045
Lebanon	14,460	3,870	1,550	9,035
Sri Lanka	13,925	3,665	3,075	7,180
Algeria	13,625	8,755	3,360	1,510
Other countries of education	**377,920**	**120,790**	**68,560**	**188,570**

Source: 2006 Census of Population, Statistics Canada.

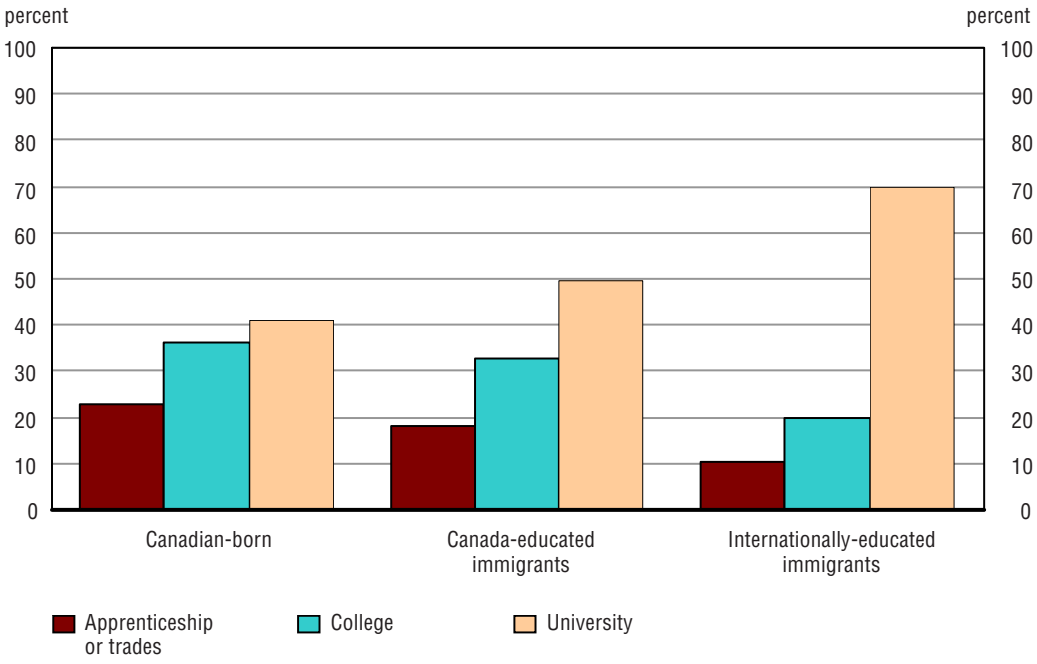
The situation was similar for established immigrants. According to the 2006 Census, the top five countries in which they reported receiving their highest postsecondary credentials were the same as those from which they had immigrated more than ten years ago: United Kingdom, the Philippines, the United States, India and Poland (Table 7).

Level of education

Internationally-educated immigrants in the core working-age are highly-educated. In fact, as shown by the Census, about seven in ten internationally-educated immigrants reported completing their education at the university-level in 2006. This is substantially more than what was observed for their Canada-educated counterparts (49%) or for the Canadian-born with a postsecondary education (41%) (Chart 1.1). This high proportion of internationally-educated immigrants with a university degree is mostly attributable to very-recent and recent immigrants, at 82% and 78%, respectively. Although at a lower proportion (58%), immigrants established in Canada for a longer period were also more likely than their Canada-educated counterparts or the Canadian-born with a postsecondary education to report having completed a university degree. At 30%, internationally-educated immigrants were much less likely than their Canada-educated counterparts (51%) and the Canadian-born with a postsecondary education (59%) to have college or trades credentials as their highest level of postsecondary education (Chart 1.1).

Chart 1.1

Level of education of individuals aged 25 to 64 with postsecondary education by immigrant status and location of study, Canada, 2006



Source: 2006 Census of Population, Statistics Canada.

Attendance at school

Internationally-educated immigrants often have to further their education upon their arrival in the country. In fact, as shown in Table 8, slightly more than one in five (22%) very-recent internationally-educated immigrants reported attending school in 2006; this was higher than the proportion reported by their Canadian-born counterparts (11%). In comparison, about 12% of recent immigrants and 7% of established immigrants aged 25 to 64 who had received their education abroad reported attending school in 2006.

Table 8

Attendance at school of individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, Canada, 2006

	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
Attendance at school status	number					
Total	**7,784,240**	**1,244,890**	**1,399,010**	**450,045**	**288,775**	**660,190**
Did not attend school	6,910,145	1,057,040	1,218,865	350,360	253,185	615,325
Attended school	874,095	187,845	180,150	99,680	35,595	44,870

Source: 2006 Census of Population, Statistics Canada.

Instructional programs

At about 20%, "business, management, marketing and related support services" was the most common program of study reported by both the core working-age immigrant and non-immigrant populations in 2006 (Table 9). With proportions ranging from 10% to 13%, instructional programs leading to health professions and related clinical sciences were also high among the Canadian-born and the overall immigrant population aged 25 to 64.

Table 9

Top 10 instructional programs for individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, Canada, 2006

	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
Instructional programs	number					
All programs	**7,784,240**	**1,244,890**	**1,399,010**	**450,045**	**288,775**	**660,190**
Total top 10 instructional programs	**5,392,850**	**903,030**	**980,555**	**319,155**	**203,885**	**457,495**
Business, management, marketing and related support services	1,585,830	277,560	272,845	90,590	54,490	127,760
Health professions and clinical sciences	973,800	156,005	141,745	42,700	25,820	73,225
Education	632,365	62,325	79,135	21,620	14,035	43,480
Mechanic and repair technologies / technicians	462,685	52,040	39,185	5,590	4,910	28,685
Engineering	215,635	81,750	227,155	93,070	60,880	73,195
Engineering technologies / technicians	367,570	61,210	47,150	9,020	6,935	31,190
Computer and information sciences and support services	259,280	83,030	59,105	27,700	16,650	14,760
Construction trades	339,380	33,230	24,750	3,330	3,145	18,275
Social sciences	260,345	50,225	61,065	20,655	12,935	27,475
Personal and culinary services	295,960	45,655	28,420	4,880	4,085	19,450
Other instructional programs	**2,391,390**	**341,860**	**418,455**	**130,890**	**84,890**	**202,695**

Source: 2006 Census of Population, Statistics Canada.

At 16%, engineering programs represented the second most common program of study for internationally-educated immigrants in the core working-age group of 25 to 64. This is attributable in large part to very-recent and recent immigrants, each at about 21%. Engineering programs were much less common among their Canada-educated counterparts (7%) and the Canadian-born (3%).

As shown in Table 9, the top instructional fields of study reported by the internationally-educated immigrant population varied according to the period of landing in Canada. This is not surprising considering that the number and types of jobs available to workers change over time due to shifts in the population and the economy. While there was not much difference between the very-recent and recent immigrants and those established in Canada for more than ten years in terms of the proportion of instructional programs accounted for by "business, management, marketing and related support services" (each at about 20%) and programs leading to health professions and related clinical sciences (each at about 10%), very-recent and recent immigrants were about twice as likely as their counterparts established in Canada for more than ten years to have reported engineering as one of their top fields of study (21% vs. 11%).

Linguistic diversity

The shift in the sources of immigration to Canada since the 1970s to source countries from regions other than Europe has had implications for cultural diversity, particularly language diversity. According to a recent study of immigrants by Statistics Canada, nearly 150 languages were reported as a mother tongue among the immigrant population in 2006 (Statistics Canada 2007a).

English was the largest language group, with about 18% of internationally-educated immigrants in the core working-age reporting that English alone was the language they learned during childhood and still understood. A small share (3%) of the internationally-educated immigrant population aged 25 to 64 reported French as their only mother tongue (Table 10). However, the share was much higher in Quebec, where 18% of the internationally-educated immigrant population reported French as their only mother tongue.

Table 10

Mother tongues of internationally-educated immigrants aged 25 to 64 by period of landing, Canada, 2006

	Internationally-educated immigrants			
	All	Very-recent	Recent	Established
Mother tongue	number			
All languages	**1,399,010**	**450,045**	**288,775**	**660,190**
Official languages	**333,045**	**77,715**	**46,800**	**208,540**
English	245,040	47,120	30,180	167,740
French	44,940	15,870	7,780	21,290
English and French	825	290	90	445
Multiple mother tongues with at least one official language	42,240	14,435	8,750	19,065
Non-official languages	**1,065,965**	**372,330**	**241,980**	**451,660**
Total top 10 mother tongues	**695,320**	**253,320**	**166,775**	**275,245**
Chinese languages	206,035	78,520	59,455	68,065
Tagalog	91,310	27,520	16,860	46,935
Spanish	64,760	28,475	9,785	26,505
Arabic	64,175	27,020	13,135	24,015
Punjabi	59,465	17,725	13,505	28,240
Russian	52,290	21,275	19,620	11,400
Polish	45,530	2,655	2,625	40,250
Urdu	42,575	19,240	14,325	9,010
Korean	35,185	15,120	9,625	10,440
Romanian	33,995	15,770	7,840	10,385
Other mother tongues	**370,645**	**119,010**	**75,205**	**176,415**

Source: 2006 Census of Population, Statistics Canada.

Despite the fact that many internationally-educated immigrants reported English or French as their mother tongues, the large majority reported having learned a different language during childhood. According to another Statistics Canada report on the evolving linguistic portrait of the population in Canada, people whose mother tongue was neither English nor French (allophones) made up 20% of the population in 2006, up from 18% in 2000 (Statistics Canada 2007b). The rapid growth in the allophone population in Canada is mostly attributable to the increase in the number of very-recent and recent immigrants. In fact, as shown in Table 10, of the 738,800 internationally-educated immigrants who arrived in Canada in the last ten years, more than 80% reported a mother tongue other than English or French. This is considerably more than the proportion observed for their counterparts established in the country for more than ten years, at 68%.

Reflecting the leading source countries of immigrants to Canada from different waves, the largest proportion of internationally-educated immigrants reported Chinese (15%), including the various dialects, such as Cantonese and Mandarin as their mother tongue. This was followed by Tagalog (7%), Spanish (5%), Arabic (5%), Punjabi (4%) and Russian (4%). A small proportion (3%) of the internationally-educated immigrants aged 25 to 64 reported multiple mother tongues, including at least one of Canada's two official languages (Table 10).

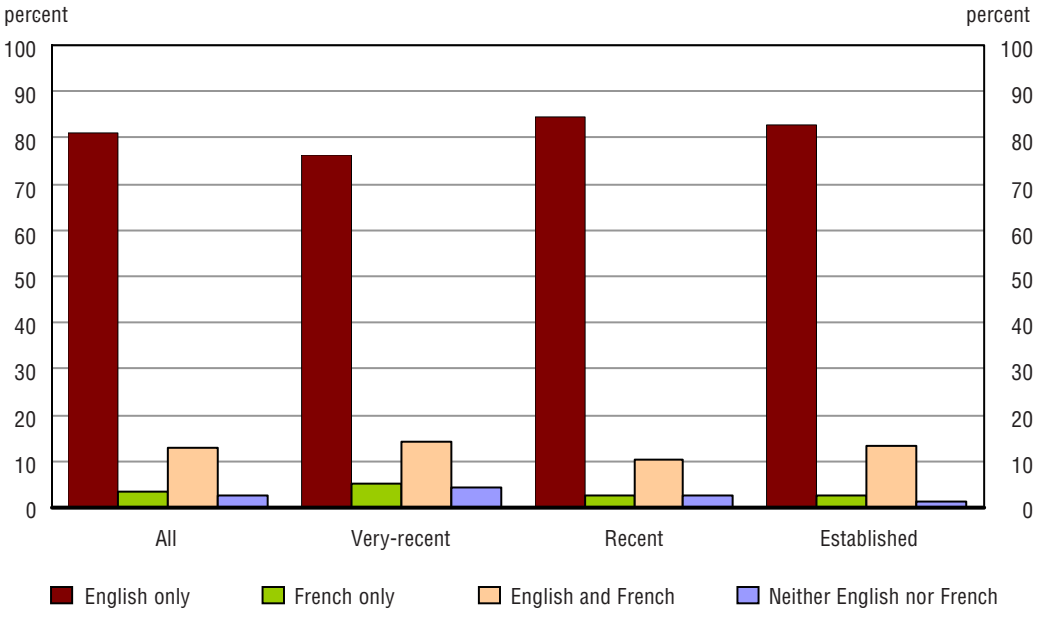
Ability to conduct a conversation in one of the official languages

Official-language proficiency is an important factor contributing to immigrant integration in Canada. A recent Statistics Canada survey, the Longitudinal Survey of Immigrants to Canada, indicated that learning English or French was one of the challenges frequently cited by immigrants to the country, third after a lack of Canadian work experience and a lack of acceptance or recognition of their foreign work experience or qualifications (Statistics Canada 2005).

Despite this fact, the large majority (98%) of internationally-educated immigrants aged 25 to 64 reported that they could converse in English and/or French in 2006. As illustrated in Chart 1.2, knowledge of English alone represented the bulk of this group, at about 81%, followed by knowledge of both English and French (13%) and knowledge of French only (4%). Only a small proportion (3%) reported not being able to conduct a conversation in either English or French.

Chart 1.2

Ability to conduct a conversation in one of the official languages of internationally-educated immigrants aged 25 to 64 by period of landing, Canada, 2006



Source: 2006 Census of Population, Statistics Canada.

Not surprisingly, very-recent (4%) and recent immigrants (3%) were more likely than established immigrants (1%) to report not being able to conduct a conversation in either official language (Chart 1.2).

Visible minority groups

According to a report by Statistics Canada on the ethnocultural diversity of the nation's population, the visible-minority population has grown steadily over the past 25 years, rising from slightly less than 5% of the total population in 1981, to 9% in 1991, 11% in 1996, 13% in 2001 and 16% in 2006 (Statistics Canada 2008c). The growth of the visible-minority population was due largely to the increasing number of recent immigrants who were from non-European countries.

Visible minority population

The people who identify themselves as a visible minority comprise one of four groups designated under the *Employment Equity Act*. The other three are women, Aboriginal people and people with disabilities. The Census collects information on these four groups to meet federal employment equity legislation requirements.

According to the *Employment Equity Act*, visible minorities are defined as 'persons, other than Aboriginal persons, who are non-Caucasian in race or non-white in colour.' Under this definition, regulations specify that the following groups are included in the visible minority population: Chinese, South Asians, Blacks, Arabs, West Asians, Filipinos, Southeast Asians, Latin Americans, Japanese, Koreans and other visible minority groups, such as Pacific Islanders.

In fact, as shown in Table 11, while about seven in ten internationally-educated immigrants established in the country for less than ten years reported being part of a visible-minority group in 2006, this was the case for only about half of their counterparts established in Canada for more than ten years.

Table 11

Visible minority groups of internationally-educated immigrants aged 25 to 64 by period of landing, Canada, 2006

	Internationally-educated immigrants			
	All	Very-recent	Recent	Established
Visible minority groups	number			
Total immigrants	**1,399,010**	**450,045**	**288,775**	**660,190**
Visible minority	**868,800**	**323,595**	**202,410**	**342,790**
Chinese	214,435	80,395	60,600	73,435
South Asian	245,210	92,460	61,035	91,720
Black	58,100	22,115	9,745	26,245
Filipino	124,305	37,615	23,135	63,550
Latin American	52,210	23,345	7,770	21,100
Southeast Asian	17,745	4,505	2,540	10,700
Arab	56,890	25,085	11,945	19,860
West Asian	34,625	13,895	10,035	10,690
Korean	36,345	15,540	9,930	10,875
Japanese	9,415	3,085	2,190	4,140
Multiple and not included above	19,520	5,555	3,490	10,470
Not a visible minority	**529,400**	**126,200**	**86,235**	**316,965**
Aboriginal self-reporting	**805**	**250**	**130**	**430**

Source: 2006 Census of Population, Statistics Canada.

Similar to what was observed in the case of language diversity, the ethnocultural diversity of immigrants reflects changes in the leading source countries from different waves. As shown by the 2006 Census, compared to internationally-educated immigrants established in Canada for more than ten years, larger proportions of very-recent and recent immigrants to Canada reported being part of one of the different Asian visible-minority groups such as Chinese, South Asian, Filipino, Southeast Asian, West Asian, Korean and Japanese (Table 11). This is not surprising considering that more than six in ten of very-recent and recent internationally-educated immigrants reported coming from Asia, compared to about four in ten for their counterparts established in the country for more than ten years (data not shown).

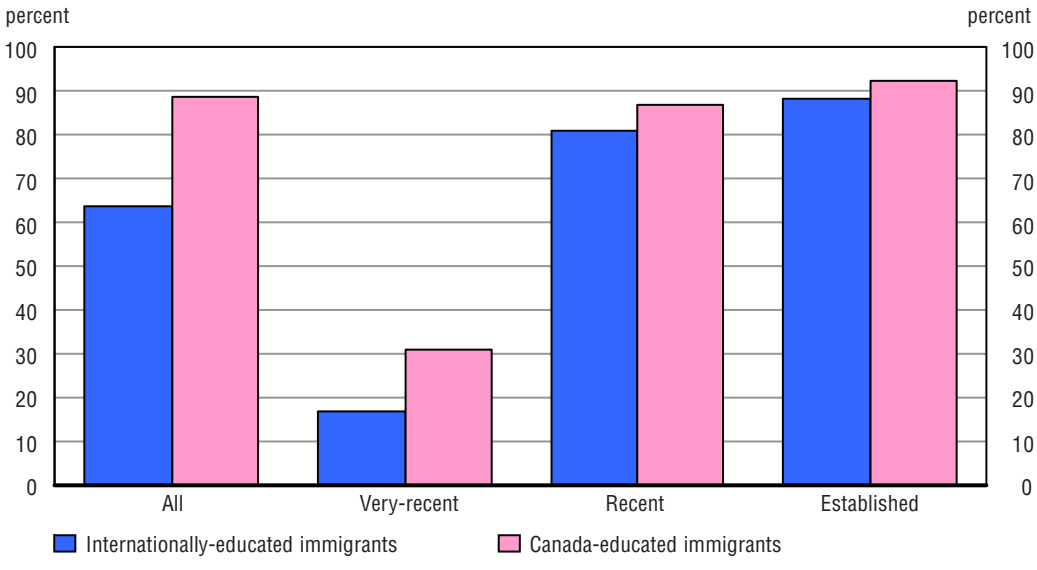
Citizenship

To be eligible for Canadian citizenship, immigrants must meet several requirements, including 1) at least three years of residency in Canada in the last four years at time of filing a request for citizenship and 2) knowledge of an official language. Depending on their age, they may also be required to take a citizenship test which evaluates the immigrant's knowledge of Canada and his or her language abilities (Citizenship and Immigration Canada 2010).

As shown in Chart 1.3, at 64%, most internationally-educated immigrants aged 25 to 64 held Canadian citizenship. Not surprisingly, those who had been in Canada for the longest period of time were the most likely to hold Canadian citizenship, since they had had more time to fulfil the requirements for application. About 81% of internationally-educated immigrants established in the country between six and ten years and 88% of those who had been in Canada for more than ten years had become naturalized citizens. The proportion of naturalized citizens was lower (17%) among those established in the country for five years or less.

Chart 1.3

Canadian citizenship of immigrants aged 25 to 64 by period of landing and location of study, Canada, 2006



Source: 2006 Census of Population, Statistics Canada.

Core working-age immigrants educated in Canada were more likely than their internationally-educated counterparts to have Canadian citizenship (89% vs. 64%). Similarly, those who had been in Canada for a longer period were more likely to hold Canadian citizenship: proportions varied from 31% for the very-recent immigrants, to 87% for recent immigrants, to 92% for those established in the country for more than ten years (Chart 1.3).

Summary

Similar to the Canadian population in general, about half of internationally-educated immigrants aged 25 to 64 were female. The largest share of internationally-educated immigrants (47%) reported being established in the country for more than ten years, followed by very-recent immigrants, at 32%, and recent immigrants, at 21%. As shown by the 2006 Census, the large majority (87%) reported living in the three most populated provinces (Ontario, British Columbia and Quebec) and more than 90% were located in large cities.

A larger proportion of internationally-educated immigrants (61%) were in the prime-working age group of 35 to 54 in 2006, compared to their Canada-educated counterparts (55%) and to the Canadian-born with a postsecondary education (56%). The remaining 39% were distributed almost evenly between the pre-retirement age bracket of 55 to 64 (22%) and the younger age group of 25 to 34 (17%). Internationally-educated immigrants were also more likely than immigrants educated in Canada and the Canadian-born to be married and living in a more traditional-type family with children.

Internationally-educated immigrants come from many countries, more than 200 in total according to the 2006 Census. The following six Asian countries alone accounted for just slightly less than half (48%) of all very-recent and recent internationally-educated immigrants in the core-working age in 2006: the People's Republic of China (16%), India (12%), the Philippines (9%), Pakistan (5%), South Korea (3%) and Iran (3%). Although the number of immigrants from Europe has declined over the years, at 21%, they still made up the second-largest group of very-recent and recent internationally-educated immigrants to Canada, after Asia. Eastern Europe accounted for about 57% of these very-recent and recent European immigrants in the core working-age category.

The shift in the sources of immigration to Canada since the 1970s to source countries from regions other than Europe has had implications for ethnocultural diversity and the linguistic portrait of the population in Canada. In 2006, more than 80% of internationally-educated immigrants who arrived in Canada in the previous ten years reported a mother tongue other than English or French. This is considerably higher than the proportion observed for their counterparts established in the country for more than ten years, at 68%.

Despite this fact, the large majority (98%) of internationally-educated immigrants aged 25 to 64 reported that they could converse in English and/or French in 2006. Knowledge of English alone represented the bulk of this group, at about 81%, followed by knowledge of both English and French (13%) and knowledge of French only (3%). Only a small proportion (3%) reported not being able to conduct a conversation in either English or French.

Internationally-educated immigrants in the core working-age group, especially very-recent and recent immigrants, are highly-educated. In 2006, about 70% of all internationally-educated immigrants reported having completed their education at the university-level. This is substantially more than what was observed for their Canada-educated counterparts (49%) and for the Canadian-born with a postsecondary education (41%). Not surprisingly, the top five countries from which very-recent and recent internationally-educated immigrants received their highest level of education were very similar to the countries from which these individuals immigrated: the People's Republic of China, India, Philippines and Pakistan. Also included in the list of the top five countries is the United States, indicating that many very-recent and recent immigrants first completed postsecondary studies in the United States before immigrating to Canada. The situation was similar for established immigrants. According to the 2006 Census, the top five countries in which they reported receiving their highest credentials were the same as those from which they had immigrated more than ten years ago: United Kingdom, the Philippines, the United States, India and Poland.

Labour market outcomes of internationally-educated immigrants aged 25 to 64

This section provides an overview of the labour market outcomes of internationally-educated immigrants compared to immigrants who completed their education in Canada and the Canadian-born with a postsecondary education. For the purpose of this study, labour market outcomes are measured in terms of employment status, hours of work and earnings.

Labour market outcomes concepts – 2006 Census

Employment rate: for a particular group is the number of employed people in that group in the week (Sunday to Saturday) prior to Census Day (May 16 2006) expressed as a percentage of the population for that group.

Full-time full-year workers: Refers to persons aged 25 to 64 who reported working 49 to 52 weeks during 2005, for 30 hours or more per week.

Earnings: Refers to the income received by persons aged 25 to 64 during calendar year 2005 as wages and salaries, net income from a non-farm unincorporated business and/or professional practice, and/or net farm self-employment income.

Median earnings: Median earnings are earnings levels that divide the population into two halves, i.e., half of the population receiving less than this amount, and half more. We choose to use the median income instead of the average income to analyze income inequality, because in the average income high earners can bring the average up.

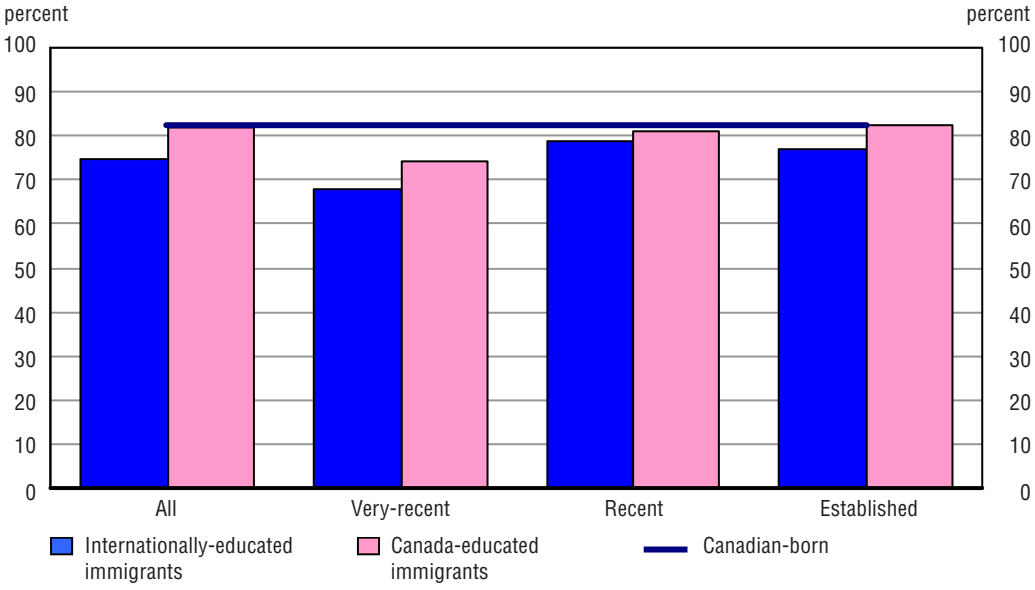
Please note that individuals with no earning are excluded from the calculation.

Employment rates

According to the 2006 Census, about three-quarters of internationally-educated immigrants in the core working-age group of 25 to 64 reported being employed in 2006 (Chart 1.4). This rate was lower than that of their counterparts educated in Canada and the Canadian-born with a postsecondary education, both at about 82%.

Chart 1.4

Employment rates of individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing and location of study, Canada, 2006



Source: 2006 Census of Population, Statistics Canada.

As noted in different studies, one important reason for the relative disadvantage of immigrants in the labour market is that the skills immigrants have acquired in their home country often are not directly transferable to the host economy. Most studies show that Canadian employers place little value on foreign work experience. While some regard this as a discriminatory practice, many argue that employers have no way of assessing the value of that foreign work experience and so discount it altogether. In other words, the transferability of foreign experience may be regarded as one factor affecting the integration of immigrants into the Canadian labour market, just as the transferability of foreign education may be treated as another factor (Reitz 2007).

Other factors influencing the labour market outcomes of immigrants include recognition of foreign credentials; level of educational attainment; extent of work experience both abroad and within Canada; differences in quality of education across countries; language barriers and related difficulties; varying strength of social networks; knowledge of and information about the Canadian labour market; and both real and perceived discrimination (Gilmore and Le Petit 2008).

Employment rates appear to vary according to the period of immigration. As shown in Chart 1.4, very-recent internationally-educated immigrants were less likely than their counterparts established in the country for a longer period to report being employed in 2006. As mentioned by Gilmore and Le Petit in a recent study on labour market integration of immigrants, one factor that may play a role in this lower employment rate is the general lack of Canadian work experience among very recent immigrants, relative to the possibly longer experience of internationally-educated immigrants established in the country for a longer period. This relatively limited experience is in part reflected in their age — 38% of very-

recent immigrants were aged 25 to 34 in 2006 compared to about 17% for recent and 3% for established internationally-educated immigrants.

On the other hand, both recent (79%) and established immigrants (77%) who received their education outside Canada had employment rates similar to that of their counterparts educated in Canada and the Canadian-born with a postsecondary education (both at about 82%) (Chart 1.4). On average, these immigrants were much closer in age to the Canadian-born with a postsecondary education, which, along with their time since landing, likely provided them with some tools and work experiences within Canada to improve their chances of securing employment (Gilmore and Le Petit 2008).

It may also be expected that the longer an immigrant is unable to practice in his or her field of expertise, the more likely he or she will experience "skills atrophy," reducing their chances of finding work in their field of expertise (Lochhead 2002). Economic factors, such as the state of the economy during a particular period of landing, will also play a role in this regard.

It was noted earlier that slightly less than one-quarter of very-recent internationally-educated immigrants were attending school, either on a full-time or part-time basis in 2006. Employment outcomes in term of earnings, type and quality of work may differ substantially for students compared to other labour market participants. As a result, the analysis of labour market outcomes treats these two groups separately.

Perhaps not surprisingly, employment rates were lower for core working-age individuals who reported attending school in 2006. This was especially the case for internationally-educated immigrants who reported being in the country for five years or less. As shown in Table 12, 58% of internationally-educated immigrants in the core working-age group of 25 to 64 who were attending school in 2006 reported being employed, compared to 71% of their counterparts who were not attending school.

Table 12

Employment rates of individuals aged 25 to 64 with postsecondary education by immigration type, period of landing, location of study and attendance at school status, Canada, 2006

		Immigrants			
	Canadian-born	All	Very-recent	Recent	Established
Attendance at school status	employment rates				
All individuals (did not attend and attended school in 2006)					
Total	**82.4**	**77.9**	**68.8**	**79.3**	**80.3**
Internationally-educated	81.9	74.5	68.0	78.7	77.1
Canada-educated	82.4	81.7	74.4	80.9	82.2
Did not attend school in 2006					
Total	**82.8**	**79.0**	**71.8**	**80.2**	**80.5**
Internationally-educated	83.1	75.7	70.8	79.2	77.1
Canada-educated	82.8	82.7	80.4	83.8	82.7
Attended school in 2006					
Total	**79.7**	**71.2**	**59.6**	**74.1**	**78.4**
Internationally-educated	74.4	66.0	58.1	75.2	76.3
Canada-educated	79.9	76.3	65.5	72.7	79.2

Source: 2006 Census of Population, Statistics Canada.

Working conditions and earnings

Considerable research effort has been devoted to understanding the earnings differences between immigrant and Canadian-born workers. As they integrate into the Canadian labour market, many immigrants initially face difficulties finding full-time full-year employment as well as locating jobs that pay relatively high wages (Statistics Canada 2008b).

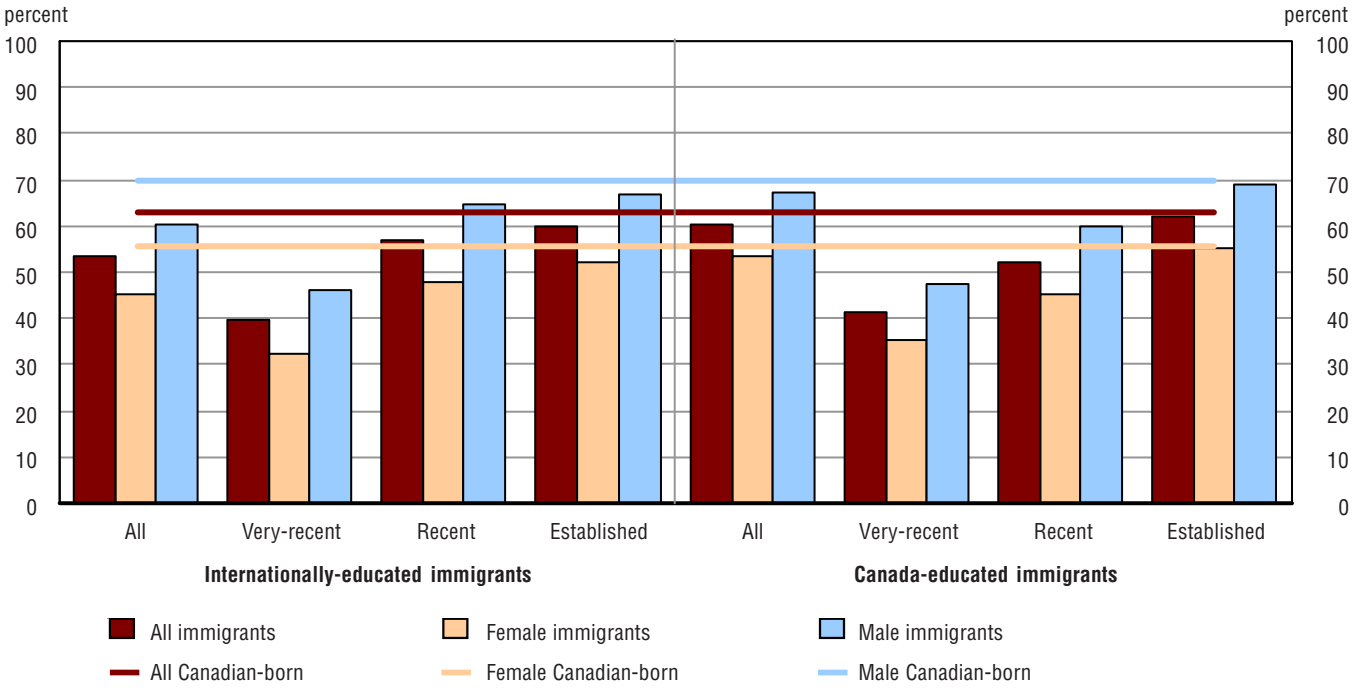
Earnings differences can arise if individuals work either part-time or part-year. In order to take account of these factors, the analysis reported in this section focuses on full-time full-year workers in the core working-age group of 25 to 64 year-olds, who worked 49 to 52 weeks during 2005, for 30 hours or more per week.

Full-time, full-year employment

According to the 2006 Census, 1.1 million immigrants in the core working-age group of 25 to 64 who reported completing their highest level of education outside Canada were employed in 2005 and had employment earnings above 0. Of these, about 53% (or 594,100) reported doing so on a full-time full-year basis (Chart 1.5).

Chart 1.5

Percentage of full-time full-year individuals aged 25 to 64 with postsecondary education by sex, immigrant status, period of landing and location of study, Canada, 2005



Source: 2006 Census of Population, Statistics Canada.

Men were generally more likely than their female counterparts to report working full-time for the full year in 2005 — about 60% of internationally-educated male immigrants reported full-time, full-year employment in 2005, compared to about 46% of women.

Results from the 2006 Census show that the longer an immigrant has been in Canada, the more likely he or she is to report being employed full-time, for the full year. As illustrated in Chart 1.5, while about 40% of very-recent internationally-educated immigrants reported full-time, full-year employment in 2005, this was the case for 57% of recent immigrants. At 60%, immigrants established in the country for more than ten years were as likely as their Canada-educated counterparts (60%) and the Canadian-born with a postsecondary education (63%) to report being employed full-time, for the full year in 2005. As noted previously, having spent a longer period of time in Canada has likely provided established immigrants with the tools and Canadian work experience that assist in improving their chances of securing employment.

One should note that the likelihood of being employed full-time for the full year may not be entirely attributable to the effect of "time elapsed since landing" since compositional change of immigrants who landed during different periods, labour market conditions as well as other factors may also contribute to differences across groups.

Full-time, full-year earnings

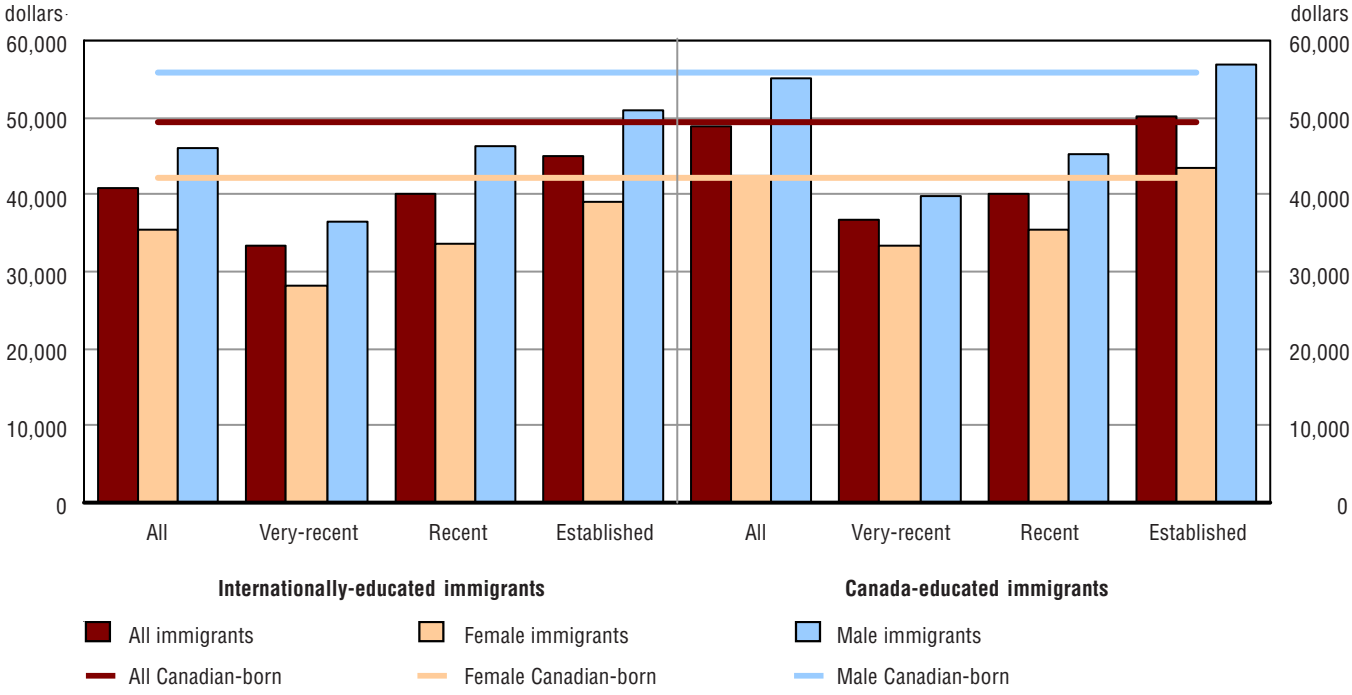
However, even when working the same number of hours for the same number of weeks, internationally-educated male and female immigrants generally earned less than their counterparts educated in Canada and Canadian-born workers with a postsecondary education. Overall, as illustrated in Chart 1.6, full-time full-year internationally-educated immigrants in the core working-age group of 25 to 64 had median earnings of $40,800, compared to median earnings of $49,000 reported by their immigrant counterparts educated in Canada and $49,300 reported by full-time full-year Canadian-born workers with a postsecondary education.

These results seem to support the argument that "the low earnings of immigrants are often attributed to the specificity of human capital to the country from which it originates, the argument being that skills generated through education or work experience in the source country cannot be directly transferred to the host country, resulting in apparently well-qualified immigrants holding low-paying jobs" (Statistics Canada 2008b).

Language barriers and both real and perceived discrimination, either statistical[1] or preference/taste-based,[2] may also represent some of the factors influencing the earnings of immigrants compared to those of the Canadian-born with a postsecondary education (Picot and Hou 2009). Oreopoulos (2008) found, for example, that job applicants with English-sounding names and Canadian experience were much more likely to be called for an interview (all other job and personal characteristics identical) than those with Asian-sounding names and foreign experience. But whether this points to discrimination or to employers' concerns regarding language ability among immigrants and other traits is not known (Picot and Hou 2009).

Chart 1.6

Median earnings of full-time full-year workers aged 25 to 64 with postsecondary education by sex, immigrant status, period of landing and location of study, Canada, 2005



Note: Median earnings correspond to income received by individuals aged 25 to 64 during calendar year 2005.
Source: 2006 Census of Population, Statistics Canada.

As observed previously, there is an association between the length of time spent in Canada and earnings of immigrants. Analysis of the International Adult Literacy Survey data by Bonikowska, Green and Riddell in 2008 indicates that returns in the Canadian labour market to foreign work experience are very low, and quite possibly, zero. It is work experience in Canada that counts toward earnings growth. When only their Canadian work experience is taken into account, immigrants' earnings are more similar to those of the Canadian-born with the same years of experience. In fact, as shown in Table 13, earning gaps between internationally-educated immigrants and Canadian-born workers decreased with time elapsed since landing in Canada. Results from the 2006 Census show that very-recent immigrants aged 25 to 64 earned, on average, 67 cents for each dollar received by Canadian-born workers with a postsecondary education in 2005. This compares to about 81 cents on the dollar for recent immigrants and to 91 cents on the dollar for immigrants established in the country for more than ten years.

Again, as noted earlier, the decrease in the size of these earning gaps may not be entirely attributable to the effect of "time elapsed since landing" since compositional change of immigrants who landed during different periods, labour market conditions as well as other factors may also contribute to differences across groups.

Another part of the explanation lies in differences in skill levels, especially between foreign-educated immigrants and those who received some or all of their education in Canada (Bonikowska, Green and Riddell 2008). In fact, at $50,100, the median earnings of Canada-educated established immigrants were substantially higher than the median earnings of their counterparts educated abroad ($44,900). At this level, median earnings of Canada-educated established immigrants were even slightly higher than those earned in 2005 by Canadian-born workers with a postsecondary education ($49,300) (Table 13).

Table 13

Median earnings of full-time full-year individuals aged 25 to 64 with postsecondary education by immigrant status, period of landing, location of study and attendance at school status, Canada, 2005

	Canadian-born		All immigrants		Very-recent immigrants		Recent immigrants		Established immigrants	
Attendance at school status	median earnings ($)	ratio	median earnings ($)	ratio	median earnings ($)	ratio	median earnings ($)	ratio	median earnings ($)	ratio
All individuals (did not attend school and attended school in 2006)										
Total	**49,300**	**100.0**	**45,000**	**91.1**	**33,800**	**68.4**	**40,100**	**81.3**	**48,400**	**98.0**
Internationally-educated	...	...	40,800	82.6	33,300	67.4	40,200	81.4	44,900	90.9
Canada-educated	...	...	49,000	99.3	36,700	74.4	40,100	81.2	50,100	101.5
Did not attend school in 2006										
Total	**49,800**	**100.0**	**45,600**	**91.5**	**34,400**	**69.0**	**40,300**	**80.9**	**48,900**	**98.1**
Internationally-educated	...	...	41,200	82.7	33,700	67.7	40,200	80.7	44,900	90.3
Canada-educated	...	...	49,900	100.3	39,300	78.8	40,600	81.4	50,700	101.8
Attended school in 2006										
Total	**46,000**	**100.0**	**40,700**	**88.6**	**31,100**	**67.6**	**39,000**	**84.9**	**44,900**	**97.8**
Internationally-educated	...	...	37,500	81.5	31,500	68.5	40,000	86.9	43,400	94.5
Canada-educated	...	...	43,200	93.9	29,700	64.7	37,800	82.3	45,300	98.6

... not applicable

Notes: Canadian-born was treated as one category independently of their location of study.
Median earnings correspond to income received by individuals aged 25 to 64 during calendar year 2005.

Source: 2006 Census of Population, Statistics Canada.

Results from the 2006 Census also showed that internationally-educated immigrants aged 25 to 64 who reported not attending school in 2006 were more likely than their counterparts attending school to have secured employment on a full-time full-year basis (57% and 43%, respectively) and to report higher earnings ($41,200 and $37,500, respectively) (Table 13).

Summary

As shown by the 2006 Census, about three-quarters of internationally-educated immigrants in the core working-age group of 25 to 64 reported being employed in 2006, which was lower than the employment rates recorded by their counterparts educated in Canada and the Canadian-born with a postsecondary education, both at about 82%.

As reported in different studies, one important reason for this relative disadvantage is that the skills immigrants have acquired in their home country are often not directly transferable to the host economy. Recognition of foreign

credentials, level of education attainment, degree and length of experience abroad and within Canada, differences in quality of education in some countries, language barriers and related difficulties, varying strength of social networks, knowledge of and information about the Canadian labour market and both real and perceived discrimination may also represent some of the factors influencing the labour market outcomes of immigrants compared to those of the Canadian-born with a postsecondary education.

As they integrate into the Canadian labour market, many immigrants initially face difficulties finding employment as well as locating jobs that pay relatively high wages. Many internationally-educated newcomers engage in further education in order to increase their Canadian education and experience. In 2006, slightly more than one in five (22%) very-recent internationally-educated immigrants reported attending school. In comparison, about 12% of recent immigrants and 7% of established immigrants aged 25 to 64 who had received their education abroad reported attending school in 2006.

Even when working the same number of hours for the same number of weeks, internationally-educated immigrants generally earned less than their counterparts educated in Canada and Canadian-born workers with a postsecondary education. In fact, internationally-educated immigrants who worked on a full-time full-year basis in 2005 had median earnings of $40,800, lower than the median earnings of $49,000 reported by their immigrant counterparts educated in Canada and the $49,300 reported by full-time full-year Canadian-born workers.

Working in their field of study or not?

Unlike the waves of immigrants who arrived in the 1950s and 1960s, those arriving in Canada since the 1970s have possessed relatively high educational levels. This is a result, in part, of the introduction of a points-based immigrant selection system which places weight on "human capital" criteria, including education, work experience and knowledge of at least one official language. The selection of immigrants through such a system is based on the presumption that the application of such criteria in the selection process will increase employability and ease the transition of new immigrants into the Canadian labour market (Reitz 2007).

Boudarbat and Chernoff (2009) observed that, if one of the main functions of education, obtained either inside or outside the country, is to provide skills that will be used in subsequent employment, then it would be an inefficient use of resources, for both individuals and for society as a whole, not to use their education in their jobs.

Methodology: Working in their field of study or not?

The main indicator used to determine if an individual is working in a job corresponding to their field of study is the 'education-job match rate.' The education-job match rate was calculated for each instructional program leading to the targeted occupations as identified by the Foreign Credential Recognition (FCR) Program at Human Resources and Skills Development Canada (HRSDC), (see Appendix 3 for the list of targeted occupations).

The education-job match rate is calculated as the total number of individuals working in the best corresponding occupation or in an occupation requiring similar or higher skill levels divided by the total number of individuals with the field of study that would typically lead them to that occupation.

As shown below, the methodology used to determine if an individual is working in his/her field of study is not limited to a match between a given instructional program and the best corresponding occupation, but also includes the 'skill level' concept (i.e., match between a given instructional program and an occupation requiring similar or higher skill levels) as presented in the 'National Occupational Classification Matrix' produced by HRSDC in 2006 (See Appendix 4).

Hence, for a given identified instructional program, an individual can be:

1. Working in the best corresponding occupation. Individuals in this category are said to be working in their field of study;
2. Not working in the best corresponding occupation, but in an occupation requiring similar or higher skill levels. Individuals in this category are said to be working in equivalent occupations; or
3. Working in an occupation requiring lower skill levels. Individuals in this category are said to be working in occupations for which they are over-qualified.

Methodology: Working in their field of study or not? (concluded)

In the present analysis, the match between a given instructional program and the best corresponding occupation is referred to as the 'specific education-job match rate.' The extended definition of this match is referred to as the 'overall education-job match rate.' It expands the concept of 'match' to include the match between a given instructional program and the best corresponding occupation or an equivalent occupation.

Please refer to Appendix 5 for more information on this methodology and to see the list of instructional programs that would typically lead to the targeted occupations as identified by the FCR Program at HRSDC.

This section examines the proportion and characteristics of internationally-educated immigrants working in their field of study or in occupations requiring similar or higher skill levels compared to immigrants who completed similar credentials in Canada and the Canadian-born with a postsecondary education. As shown in the previous box, the methodology used in this report to determine if an individual is working in his/her field of study is not limited to a match between a given instructional program and the best corresponding occupation, but also includes a larger range of occupations requiring similar or higher educational skill levels (for example, individuals with a college-level credential working in an occupation either requiring that level of education or a higher level). Only those who reported not attending school in 2006 are analysed since their outcomes in terms of the type and quality of work are likely to differ from those of individuals who were attending school.

In 2006, slightly more than 1.0 million internationally-educated immigrants aged 25 to 64 reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations as identified by the FCR at HRSDC. Of these, about 87% (or 881,600) reported not attending school in 2006; this share is similar to that of immigrants educated in Canada (85%) and of the Canadian-born with a postsecondary education (90%).

New policy measures to improve the integration of internationally-educated workers from selected occupations into the Canadian labour market are currently being developed by the federal government and concerned stakeholders. Given this, the following section focuses on the education-job match rates of individuals from instructional programs that would normally lead to work in one of the occupations identified in the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

The Framework describes the commitment by provincial and territorial governments and the Government of Canada to work together to create positive change for immigrants in Canada. As part of this commitment, immigrants looking to enter regulated occupations in Canada will receive clear information as early as possible in the immigration process, fair treatment during the assessment process and prompt communication of recognition decisions. Supports will also be extended to both individuals and employers to help enable immigrants' participation in the workforce (FLMM 2009).

According to the Framework, by the end of 2010, individuals in eight occupational groups — architects, engineers, financial auditors and accountants, medical laboratory technologists, occupational therapists[3], pharmacists, physiotherapists and registered nurses — will know within one year[4] whether their qualifications will be recognized, be informed of the additional requirements necessary for registration or be directed toward related occupations commensurate with their skills and experience. By the end of 2012, six more groups — dentists, engineering technicians, licensed practical nurses, medical radiation technologists, physicians and teachers (K-12) — will also be included.

Proportion working in their field of study or in equivalent occupations

Results from the Census show that less than one in five internationally-educated immigrants aged 25 to 64 reported working in their field of study in 2006. In fact, among the 881,600 internationally-educated immigrants not attending school in 2006 who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC, about 17% (or 147,600) reported working in the best corresponding occupation (for example, individuals with highest level of education in engineering working as engineers). This proportion increased to 41% when considering occupations requiring similar or higher skill levels (for example, individuals whose highest level of education was in engineering working as architects or in a management occupation) (Table 14).

Results from the 2006 Census showed that Canada-educated immigrants and the Canadian-born with a postsecondary education were more likely than immigrants educated abroad to report working in the best corresponding occupation or in an occupation requiring similar or higher skill levels; slightly less than 30% reported working in the best corresponding occupation and this proportion increased to slightly more than 60% when considering occupations requiring similar or higher skill levels (Table 14).

Table 14

Job status of individuals aged 25 to 64 by immigrant status, period of landing and location of study, Canada, 2006

	Canadian-born	Canada-educated immigrants	Internationally-educated immigrants			
			All	Very-recent	Recent	Established
Job status	number					
All occupations	**4,698,445**	**735,170**	**881,570**	**257,080**	**185,155**	**439,330**
	percent					
Working in the best corresponding occupation or in occupations requiring similar or higher skill levels	62.5	60.6	41.4	34.3	42.2	45.3
Working in the best corresponding occupation	28.2	27.0	16.7	14.9	18.0	17.3
Working in occupations requiring lower skill levels or not working	37.5	39.4	58.6	65.7	57.8	54.7

Note: Individuals attending school in 2006 are excluded.
Source: 2006 Census of Population, Statistics Canada.

A considerably high proportion of internationally-educated immigrants (43%) reported working in occupations for which they were over-qualified, while another 16% were simply not working. Slightly more than half (53%) of these over-qualified internationally-educated immigrants were female and about 60% reported being in the prime-working age group of 35 to 54. Slightly less than half (47%) reported being in the country for more than ten years, 33% for five years or less and 21% from six to ten years. Provincially, the highest proportions of over-qualified internationally-educated immigrants were found in Manitoba (64%), Quebec (60%), British Columbia (60%), Ontario (58%), Alberta (56%) and Saskatchewan (53%). The Atlantic Provinces and the Territories showed the lowest proportions of over-qualified internationally-educated immigrants, at 49% and 46%, respectively.

Galarneau and Morissette (2008) observed that "the proportion of long-term immigrants with a university degree found in jobs with low educational requirements, such as clerks, truck drivers, salespeople, cashiers and taxi drivers, rose steadily between 1991 and 2006." Analysis of the 2006 Census data in this report shows similar findings.

As shown in Table 15, independent of their foreign credentials, more than half (54%) of these over-qualified internationally-educated immigrants (i.e., those who reported working in occupations requiring lower skill levels) were found to be working in occupations related to sales and service (32%) or to business, finance and administration (22%). Another 14.5% reported working in occupations unique to processing, manufacturing and utilities.

Table 15

Occupations of internationally-educated immigrants aged 25 to 64 who reported working in occupations requiring lower skill levels, Canada, 2006

Occupations		Internationally-educated immigrants	
		number	percentage
All occupations		**382,970**	**100.0**
Broad category of occupations			
G	Sales and service occupations	122,915	32.1
B	Business, finance and administrative occupations	85,615	22.4
J	Occupations unique to processing, manufacturing and utilities	55,580	14.5
H	Trades, transport and equipment operators and related occupations	53,155	13.9
C	Natural and applied sciences and related occupations	27,690	7.2
D	Health occupations	16,700	4.4
E	Occupations in social science, education, government service and religion	10,550	2.8
I	Occupations unique to primary industry	6,380	1.7
F	Occupations in art, culture, recreation and sport	4,390	1.1
A	Management occupations	..	..
Detailed category of occupations			
B5	Clerical occupations	63,185	16.5
G9	Sales and service occupations, n.e.c.	42,935	11.2
C1	Technical occupations related to natural and applied sciences	27,690	7.2
G2	Retail salespersons and sales clerks	22,960	6.0
J1	Machine operators in manufacturing	21,045	5.5
H7	Transportation equipment operators and related workers, excluding labourers	19,985	5.2
J2	Assemblers in manufacturing	19,545	5.1
G1	Wholesale, technical, insurance, real estate sales specialists, and retail, wholesale and grain buyers	13,605	3.6
G8	Child care and home support workers	12,515	3.3

Table 15 (concluded)

Occupations of internationally-educated immigrants aged 25 to 64 who reported working in occupations requiring lower skill levels, Canada, 2006

Occupations		Internationally-educated immigrants	
		number	percentage
J3	Labourers in processing, manufacturing and utilities	12,500	3.3
D3	Assisting occupations in support of health services	11,700	3.1
E2	Paralegals, social services workers and occupations in education and religion, n.e.c.	10,550	2.8
H8	Trades helpers, construction and transportation labourers and related occupations	9,660	2.5
B3	Administrative and regulatory occupations	9,070	2.4
G3	Cashiers	8,225	2.1
G7	Occupations in travel and accommodation, including attendants in recreation and sport	6,245	1.6
H4	Mechanics	5,990	1.6
B1	Finance and insurance administration occupations	5,945	1.6
G6	Occupations in protective services	5,625	1.5
D2	Technical and related occupations in health	4,995	1.3
B2	Secretaries	4,875	1.3
H2	Stationary engineers, power station operators and electrical trades and telecommunications occupations	4,430	1.2
F1	Technical occupations in art, culture, recreation and sport	4,390	1.1
H1	Construction trades	4,240	1.1
I0	Occupations unique to agriculture, excluding labourers	4,180	1.1
G5	Occupations in food and beverage service	4,135	1.1
G4	Chefs and cooks	3,885	1.0
H3	Machinists, metal forming, shaping and erecting occupations	3,535	0.9
H5	Other trades, n.e.c.	3,065	0.8
G0	Sales and service supervisors	2,790	0.7
B4	Clerical supervisors	2,545	0.7
J0	Supervisors in manufacturing	2,490	0.7
I2	Primary production labourers	1,685	0.4
H0	Contractors and supervisors in trades and transportation	1,535	0.4
H6	Heavy equipment and crane operators, including drillers	715	0.2
I1	Occupations unique to forestry operations, mining, oil and gas extraction and fishing, excluding labourers	515	0.1
A0	Senior management occupations	..	..
A1	Specialist managers	..	..
A2	Managers in retail trade, food and accommodation services	..	..
A3	Other managers, n.e.c.	..	..
B0	Professional occupations in business and finance	..	..
C0	Professional occupations in natural and applied sciences	..	..
D0	Professional occupations in health	..	..
D1	Nurse supervisors and registered nurses	..	..
E0	Judges, lawyers, psychologists, social workers, ministers of religion, and policy and program officers	..	..
E1	Teachers and professors	..	..
F0	Professional occupations in art and culture	..	..

.. not available for a specific reference period

Note: Individuals attending school in 2006 are excluded.

Source: 2006 Census of Population, Statistics Canada.

In addition, occupations in which over-qualified internationally-educated immigrants were found in 2006 varied according to their postsecondary credential. In the case of over-qualified internationally-educated immigrants with credentials in engineering, for example, 19% reported working in technical occupations related to natural and applied sciences, 17% in occupations unique to processing, manufacturing and utilities (17%) and 9% in clerical occupations. In the case of those with credentials in medicine, 26% were found to be working in technical and related occupations in health, 12% in clerical occupations and 10% in assisting occupations in support of health services.[5]

As noted at the beginning of this section, the presumption is that the selection of skilled immigrants on "human capital" criteria such as education, work experience, and knowledge of either official language will increase their employability upon their arrival in Canada. However, most studies have reported that the market value of immigrant qualifications in Canada is generally less than for native-born Canadians (Reitz 2007).

Indeed, the analysis reported here finds that while about 41% of internationally-educated immigrants reported working in their field of study or in an occupation requiring similar or higher skill levels, this was the case for about 61% of their counterparts educated in Canada and 63% of the Canadian-born with a postsecondary education (Table 14).

According to Reitz (2007), there are competing explanations for the lower value of immigrant qualifications on the Canadian labour market. One is that a foreign-acquired education is of lower quality than a Canadian education or is not entirely transferable to the Canadian context. An alternate explanation is that internationally-acquired educational qualifications have relevance to Canadian workplace requirements, but for various reasons that relevance is not recognized by Canadian employers or by regulatory organizations who monitor licensed professions and trades people.

Such barriers have important labour market consequences for the mismatched individual, employers and society as a whole. According to a report by Boudarbat and Chernoff (2009), education-job mismatch may cause job dissatisfaction, lead to employee turnover and have a clear negative effect on wages / job status.

Similarly, most studies show foreign work experience to have relatively little value in the Canadian labour market as well. This is usually seen as a discriminatory practice, but in some cases, employers may be justified in wondering whether someone with job skills developed abroad will do as well in a Canadian context. In other words, the transferability of foreign experience may be a variable, just as the transferability of foreign education is (Reitz 2007).

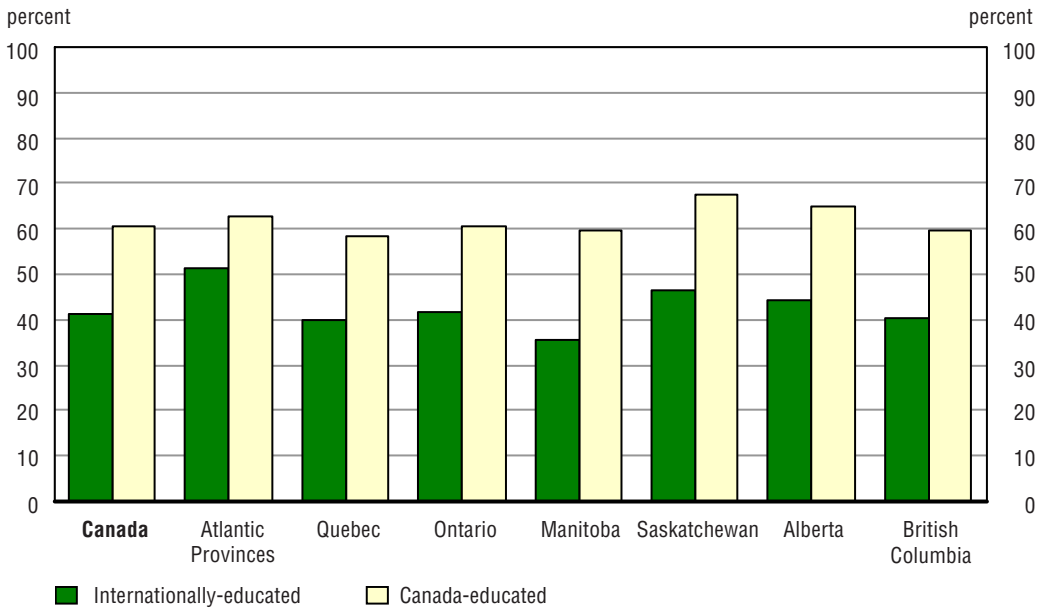
Furthermore, the education-job match rates of immigrants are not only indicative of recognition (or lack thereof) of foreign credentials and work experience, but may reflect other factors as well. These include labour market conditions such as demand for particular occupations; language skills; and personal decisions such as the desire to work in the occupation related to their field of study or in another occupation (Zietsma 2010). Boudarbat and Chernoff (2009) noted that individuals may have various reasons for accepting employment outside their field of study. While there will always be factors that facilitate or restrict individuals in finding a job related to their field of study, personal preferences also play a role. For example, Heijke, Meng and Ris (2003) show that individuals who feel it important to use their knowledge and skills on the job have higher education-job match rates.

Province and overall education-job match rates

Provincially, overall education-job match rates (i.e., match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels) were highest for internationally-educated immigrants in the Atlantic Provinces (51%). Overall education-job match rates for internationally-educated immigrants were also above the national average of 41% in Saskatchewan (47%) and Alberta (45%), regions that had strong labour markets in 2006. Canada's largest provinces, Ontario, Quebec and British Columbia had education-job match rates that were at about the same level as the national average (between 40% and 42%) (Chart 1.7).

Chart 1.7

Overall education-job match rates of immigrants aged 25 to 64 by location of study and province, 2006



Notes: Individuals attending school in 2006 are excluded.
'Overall education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels.

Source: 2006 Census of Population, Statistics Canada.

Credentials and overall education-job match rates

As shown by the 2006 Census, few instructional programs led a majority of internationally-educated immigrants to work in corresponding or equivalent occupations compared to immigrants who completed their highest level of postsecondary education in Canada. In fact, of the 43 categories of credentials leading to the targeted occupations as specified by the FCR program at HRSDC, only 14 led a majority of internationally-educated immigrants to occupations related to their field of study or to occupations requiring similar or higher skill levels. This compares to about 36 for their counterparts who reported completing their education in Canada.

As shown in Table 16, in the case of internationally-educated immigrants, more than half of the top 10 'most favourable' instructional programs (i.e., those for which a majority reported working in the best corresponding occupation or in occupations requiring similar or higher skill levels) led to occupations that required a level of education below the university level; five of these led to regulated trades: heavy / industrial equipment maintenance technologies; carpentry / carpenter; precision metal working; electrical and power transmission installers; and vehicle maintenance and repair technologies. Instructional programs leading to occupations related to health (for example, physicians, medical laboratory technologists and pathologists' assistant and technical occupations in dental health) and to occupations where mathematics skills are very important (for example, engineering technicians and occupations related to computer and information sciences) also had relatively high education-job match rates (Table 16).

Among instructional programs leading to seven of the targeted occupations identified by the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*, only three led a majority of internationally-educated immigrants to occupations related to their field of study or to occupations requiring similar or higher skill levels: clinical / medical laboratory science and allied professions (52%), rehabilitation and therapeutic professions (51%) and pharmacy, pharmaceutical sciences and administration (50%). These were followed by internationally-educated immigrants with credentials in nursing (49%), engineering (42%), architecture (39%) and accounting and related services and finance and financial management services (36%) (Table 16).

Table 16

Top 10 'most favourable' instructional programs for internationally-educated immigrants aged 25 to 64, Canada, 2006

Instructional programs	Internationally-educated immigrants	
	number	overall education-job match rate
All instructional programs leading to targeted occupations	**365,310**	**41.4**
Top 10 'most favourable' instructional programs		
Heavy / industrial equipment maintenance technologies	3,010	66.7
Carpentry / carpenter	2,855	66.2
Precision metal working	11,610	60.9
Medicine (MD) and medical residency programs	8,890	56.0
Electrical and power transmission installers	5,205	55.6
Dental support services and allied professions	2,885	55.1
Engineering technologies / technicians programs	23,710	54.4
Computer programs[1]	25,725	52.3
Clinical / medical laboratory science and allied professions	3,990	52.1
Vehicle maintenance and repair technologies	10,310	51.0
Other instructional programs		
Rehabilitation and therapeutic professions	2,415	50.9
Design and applied arts	6,540	50.7
Physics	4,205	50.5
Pharmacy, pharmaceutical sciences and administration	3,960	50.3
Allied health diagnostic, intervention and treatment professions	1,390	49.3
Dentistry (DDS, DMD) and dental residency programs	1,995	49.2
Culinary arts and related services	5,690	48.8
Nursing	20,825	48.5
Management sciences and quantitative methods	190	48.1
City / urban, community and regional planning	485	44.9
Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	115	44.2

Table 16 (concluded)

Top 10 'most favourable' instructional programs for internationally-educated immigrants aged 25 to 64, Canada, 2006

Instructional programs	Internationally-educated immigrants	
	number	overall education-job match rate
Chemistry	6,885	42.4
Engineering programs	80,270	41.7
Veterinary medicine (DVM) and veterinary residency programs	750	41.6
Legal support services and legal professions and studies, other	950	41.1
Cosmetology and related personal grooming services	5,760	38.8
Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	3,475	38.7
Business operations support and assistant services	11,670	38.4
Social work	2,070	38.0
Linguistic, comparative and related language studies and services	3,455	36.9
Accounting and related services and finance and financial management services	27,065	36.4
Biology, general	2,565	36.1
Journalism	1,135	35.2
Business / commerce, general, business administration, management and operations, and marketing	35,055	35.2
Library science / librarianship	755	34.8
Psychology, general and clinical psychology	3,065	34.2
Human resources management and services	710	32.4
Law (LLB, JD, BCL) and legal research and advanced professional studies (Post-LLB / JD)	4,395	31.6
Forestry	615	30.0
Economics	9,290	29.0
Education programs[2]	17,430	26.5
Agriculture, general and plant sciences	1,690	16.2
Physical science technologies / technicians	225	12.5

1. Computer programs include computer programming, data processing and data processing technology / technician, information science / studies, computer systems analysis / analyst, computer science, computer software and media applications, computer systems networking and telecommunications, computer / information technology administration and management, and computer and information sciences and support services, other.
2. Education programs include education, general, special education and teaching, student counselling and personnel services, teacher education and professional development, specific levels and methods, and teacher education and professional development, specific subject areas.

Notes: Individuals attending school in 2006 are excluded.
'Most favourable' instructional programs represent those for which a majority of individuals reported working in the best corresponding occupation or in occupations requiring similar or higher skill levels.
'Overall education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels.

Source: 2006 Census of Population, Statistics Canada.

Immigrants educated in Canada had higher overall education-job match rates than their counterparts educated outside the country. In fact, as shown in Table 17, six of the top 10 'most favourable' instructional programs for this population led to occupations at the university level, of which five led to regulated health occupations: dentistry (DDS, DMD) and dental residency programs, medicine (MD) and medical residency programs, veterinary medicine (DVM) and veterinary residency programs, pharmacy, pharmaceutical sciences and administration, and rehabilitation and therapeutic professions (Table 17).

With overall education-job match rates ranging from 61% to 80%, all instructional programs leading to the seven targeted occupations identified by the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* led a majority of Canada-educated immigrants to the best but not necessarily corresponding occupations: pharmacy, pharmaceutical sciences and administration (80%), rehabilitation and therapeutic professions (73%), nursing (65%), architecture (64%), engineering (64%), clinical / medical laboratory science and allied professions (64%) and accounting and related services and finance and financial management services (61%) (Table 17).

Table 17

Top 10 'most favourable' instructional programs for Canada-educated immigrants aged 25 to 64, Canada, 2006

Instructional programs	Canada-educated immigrants	
	number	overall education-job match rate
All instructional programs leading to targeted occupations	**445,515**	**60.6**
Top 10 'most favourable' instructional programs		
Dentistry (DDS, DMD) and dental residency programs	2,925	94.5
Medicine (MD) and medical residency programs	8,625	94.3
Veterinary medicine (DVM) and veterinary residency programs	615	88.5
Law (LLB, JD, BCL) and legal research and advanced professional studies (Post-LLB / JD)	7,285	83.3
Pharmacy, pharmaceutical sciences and administration	3,710	80.0
Electrical and power transmission installers	7,860	75.9
Heavy / industrial equipment maintenance technologies	4,695	73.9
Rehabilitation and therapeutic professions	2,525	72.8
Allied health diagnostic, intervention and treatment professions	2,365	71.1
Carpentry / carpenter	3,845	70.8
Other instructional programs		
Dental support services and allied professions	6,080	67.4
Vehicle maintenance and repair technologies	18,100	65.7
Management sciences and quantitative methods	780	65.3
Precision metal working	15,580	65.2
Nursing	27,375	64.9
Physics	1,780	64.8
Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	235	64.4
Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	2,105	64.4
City / urban, community and regional planning	890	64.3
Engineering programs	42,950	64.1
Engineering technologies / technicians programs	34,775	63.8
Clinical / medical laboratory science and allied professions	3,240	63.5
Library science / librarianship	1,465	61.3
Education programs[1]	30,295	61.0
Accounting and related services and finance and financial management services	45,430	61.0
Social work	6,815	60.8
Design and applied arts	8,690	60.5
Computer programs[2]	40,490	60.3
Chemistry	3,485	57.6
Legal support services and legal professions and studies, other	4,895	57.5
Journalism	1,325	57.5
Business / commerce, general, business administration, management and operations, and marketing	48,470	54.7
Culinary arts and related services	5,935	53.0
Economics	8,695	51.7
Human resources management and services	2,835	51.4
Linguistic, comparative and related language studies and services	2,645	48.8
Biology, general	2,650	48.6
Psychology, general and clinical psychology	6,190	48.3
Cosmetology and related personal grooming services	14,425	48.0
Business operations support and assistant services	10,495	44.7
Forestry	715	34.4
Agriculture, general and plant sciences	625	30.0
Physical science technologies / technicians	615	28.9

1. Education programs include education, general, special education and teaching, student counselling and personnel services, teacher education and professional development, specific levels and methods, and teacher education and professional development, specific subject areas.
2. Computer programs include computer programming, data processing and data processing technology / technician, information science / studies, computer systems analysis / analyst, computer science, computer software and media applications, computer systems networking and telecommunications, computer / information technology administration and management, and computer and information sciences and support services, other.

Notes: Individuals attending school in 2006 are excluded.

'Most favourable' instructional programs represent those for which a majority of individuals reported working in the best corresponding occupation or in occupations requiring similar or higher skill levels.

'Overall education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels.

Source: 2006 Census of Population, Statistics Canada.

However, even with credentials obtained in Canada, immigrants were slightly less likely than the Canadian-born with a postsecondary education to be working in their field of study or in equivalent occupations. In fact, with the exception of the rehabilitation and therapeutic professions program (73% vs. 71%), education-job match rates of Canada-educated immigrants with credentials leading to the other six targeted occupations identified by the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications* were lower than those obtained by the Canadian-born with a postsecondary education: pharmacy, pharmaceutical sciences and administration (80% vs. 89%), nursing (65% vs. 70%), architecture (64% vs. 73%), engineering (64% vs. 69%), clinical / medical laboratory science and allied professions (64% vs. 71%) and accounting and related services and finance and financial management services (61% vs. 66%).

Recent research has found that the literacy skills of immigrants may play a role in these differences. Bonikowska, Green and Riddell (2008) found, for example, that while immigrants were more likely than the Canadian-born to have completed a university degree, the skills of the Canadian-born in prose literacy, document literacy, numeracy and problem-solving were significantly higher than those of their immigrant counterparts. Similarly, the skill levels in prose literacy, document literacy, numeracy and problem-solving of immigrants who received part or all of their education in Canada were higher than those of immigrants who received all of their education abroad.

Furthermore, Picot and Hou (2009) argue that when information on the skills (productivity or language ability) of an individual is difficult to obtain, decisions regarding hiring may be made based on the employers' notion (real or perceived, correct or incorrect) of the language skills or productivity levels of the group to which the individual belongs, rather than on those of the individual specifically.

Period of landing and overall education-job match rates

Lower overall education-job match rates for internationally-educated immigrants seem to indicate difficulties for these individuals in finding work in the occupations for which they studied or in an occupation requiring a similar or higher skill level. However, to a certain extent, the mismatch between education and employment decreases as the time spent in Canada increases.

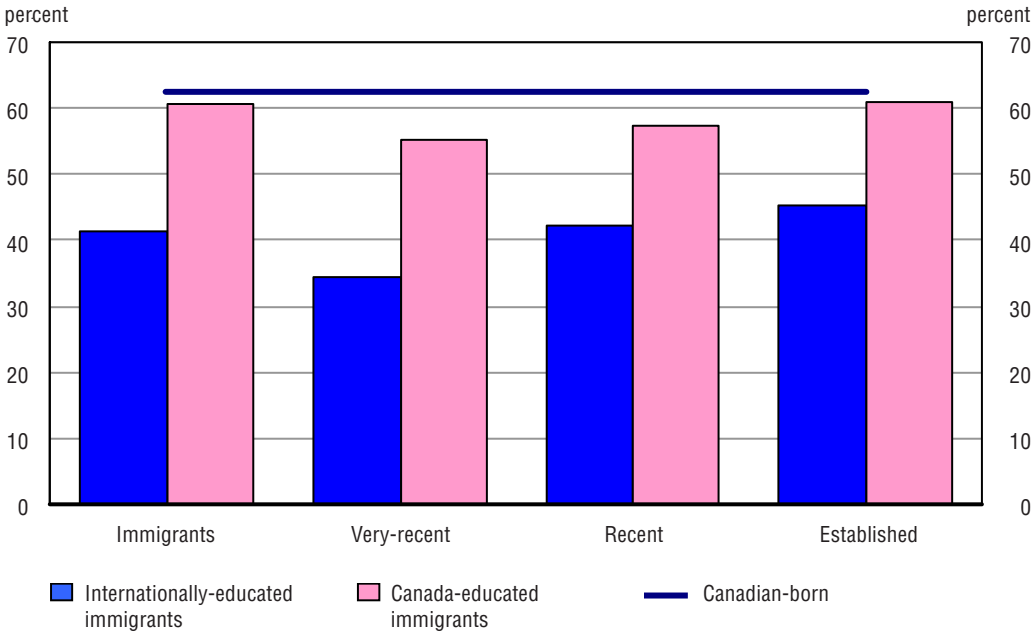
As reported in different studies, one important reason for the relative disadvantage of very-recent immigrants compared to immigrants established in the country for a longer period of time is that the skills immigrants have acquired in their home country are often not directly transferable to the host economy. Furthermore, as reported by Reitz (2007), newly-arrived immigrants nearly always experience a period of adjustment in the new country, including adjustment in the labour market. This is particularly true for those from diverse cultural backgrounds and arriving without pre-arranged employment, a situation which is typical for most immigrants to Canada. Over time, these initial difficulties can be overcome more or less successfully and employment and earnings levels rise.

In fact, as illustrated in Chart 1.8, about 45% of internationally-educated immigrants established in Canada for more than ten years reported working in the best corresponding or equivalent occupations in 2006 compared to about 34% for very-recent immigrants. However, even after ten years in Canada, internationally-educated immigrants still trailed the overall education-job match rate of their Canada-educated counterparts and the Canadian-born by more than 15 percentage points.

Bonikowska, Green and Riddell (2008) reported that although internationally-educated immigrants acquire Canadian work experience over time, another part of the explanation lies in differences in skill levels, especially between foreign-educated immigrants and those who received some or all of their education in Canada. In fact, research has found that the skill levels in prose literacy, document literacy, numeracy and problem-solving of immigrants who received all of their education abroad were lower than those of immigrants who received part or all of their education in Canada.

Chart 1.8

Overall education-job match rates of individuals aged 25 to 64 by immigrant status, period of landing and location of study, Canada, 2006



Notes: Individuals attending school in 2006 are excluded.
'Overall education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels.

Source: 2006 Census of Population, Statistics Canada.

Occupation-specific credentials and specific education-job match rates

Not all internationally-educated immigrants in the core working-age group of 25 to 64 years old faced the same challenges — depending on the particular occupation they had studied for, some were more likely than others to be working in the best corresponding occupation in 2006.

Not surprisingly, immigrants who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had higher specific education-job match rates (that is, the match between a given instructional program and the best corresponding occupation) than those who had studied in a field of study for which this relationship was not as clear. Similar results were found in various studies. As noted by Boudarbat and Chernoff (2009), graduates from occupation-specific programs overall have a much higher degree of match than those of graduates from more general programs. This is attributable to the fact that such programs provide specific skills meant for the job market.

As shown in Table 18, internationally-educated immigrants with occupation-specific credentials leading to regulated health professions (for example, physicians (43%), dentists (41%), pharmacists (36%), technical occupations in dental health care and dental assistants (35%), physiotherapists (32%) and veterinarians (30%)) had higher specific education-job match rates than those who had more general credentials such as those leading to work in business, administration and marketing (8%). Higher specific education-job match rates were also found among internationally-educated immigrants with credentials leading to work in the regulated trades (for example, carpenters and construction managers (37%), construction millwrights and industrial mechanics, and heavy-duty equipment mechanics (31%), welders and related machine operators, machinists and machining and tooling inspectors, and tool and die makers (30%)).

Table 18

Specific education-job match rates of internationally-educated immigrants aged 25 to 64 by instructional programs, Canada, 2006

Instructional programs	Internationally-educated immigrants	
	number	specific education-job match rate
All instructional programs leading to targeted occupations	**147,585**	**16.7**
Medicine (MD) and medical residency programs	6,850	43.2
Dentistry (DDS, DMD) and dental residency programs	1,670	41.2
Carpentry / carpenter	1,605	37.2
Pharmacy, pharmaceutical sciences and administration	2,830	36.0
Dental support services and allied professions	1,820	34.8
Rehabilitation and therapeutic professions	1,530	32.3
Computer programs[1]	15,630	31.8
Heavy / industrial equipment maintenance technologies	1,375	30.5
Precision metal working	5,725	30.0
Veterinary medicine (DVM) and veterinary residency programs	540	29.9
Culinary arts and related services	2,975	25.5
Nursing	10,670	24.9
Electrical and power transmission installers	2,120	22.6
Cosmetology and related personal grooming services	3,090	20.8
Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	1,740	19.4
Engineering programs	35,965	18.7
Business operations support and assistant services	5,460	18.0
Social work	880	16.1
Accounting and related services and finance and financial management services	11,985	16.1
Allied health diagnostic, intervention and treatment professions	420	14.9
Chemistry	2,410	14.8
Education programs[2]	9,415	14.3
Library science / librarianship	310	14.3
Vehicle maintenance and repair technologies	2,840	14.1
Management sciences and quantitative methods	50	12.8
Clinical / medical laboratory science and allied professions	945	12.3
Journalism	330	10.2
City / urban, community and regional planning	105	9.7
Design and applied arts	1,185	9.2
Law (LLB, JD, BCL) and legal research and advanced professional studies (Post-LLB / JD)	1,230	8.9
Business / commerce, general, business administration, management and operations, and marketing	8,185	8.2
Human resources management and services	175	8.0
Forestry	150	7.3
Psychology, general and clinical psychology	615	6.9
Engineering technologies / technicians programs	2,865	6.6
Linguistic, comparative and related language studies and services	595	6.3
Biology, general	360	5.1
Legal support services and legal professions and studies, other	110	4.8
Physics	295	3.5
Physical science technologies / technicians	45	2.5
Economics	380	1.2
Agriculture, general and plant sciences	115	1.1
Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	..	0.0

.. not available for a specific reference period

1. Computer programs include computer programming, data processing and data processing technology / technician, information science / studies, computer systems analysis / analyst, computer science, computer software and media applications, computer systems networking and telecommunications, computer / information technology administration and management, and computer and information sciences and support services, other.
2. Education programs include education, general, special education and teaching, student counselling and personnel services, teacher education and professional development, specific levels and methods, and teacher education and professional development, specific subject areas.

Notes: Individuals attending school in 2006 are excluded.
'Specific education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation.

Source: 2006 Census of Population, Statistics Canada.

Sex, age and overall education-job match rates

Data from the 2006 Census show that internationally-educated immigrants aged 35 to 54 were more likely than their counterparts in the younger and older age groups (25 to 34 and 55 to 64) to report working in the best corresponding occupation or in occupations requiring similar or higher skill levels.

Men were also more likely than their female counterparts to work in such occupations (49% vs. 33%) and, as shown in Table 19, this was generalized across all instructional programs leading to the targeted occupations as identified by the FCR Program at HRSDC and through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*.

According to the literature, there appear to be some contradictions concerning the effects of various demographic factors such as age and sex on the likelihood of working in related fields and this discrepancy is difficult to explain (Boudarbat and Chernoff 2009).

Table 19

Overall education-job match rates of full-time full-year internationally-educated immigrants aged 25 to 64 by instructional programs and sex, Canada, 2006

	Internationally-educated immigrants		
	All	Women	Men
Instructional programs	overall education-job match rate		
All instructional programs leading to targeted occupations	**41.4**	**33.2**	**48.6**
Accounting and related services and finance and financial management services	36.4	29.6	47.1
Human resources management and services	32.4	30.1	37.4
Business operations support and assistant services	38.4	38.2	43.2
Business / commerce, general, business administration, management and operations, and marketing	35.2	26.9	44.1
Engineering programs	41.7	33.6	43.7
City / urban, community and regional planning	44.9	32.9	51.5
Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	38.7	31.8	42.4
Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	44.2	18.2	65.5
Forestry	30.0	29.7	29.8
Agriculture, general and plant sciences	16.2	10.1	18.6
Engineering technologies / technicians programs	54.4	27.9	58.4
Computer programs[1]	52.3	38.3	60.4
Chemistry	42.4	32.6	50.6
Biology, general	36.1	30.7	45.5
Management sciences and quantitative methods	48.1	29.6	53.8
Physics	50.5	35.6	55.3
Physical science technologies / technicians	12.5	9.7	16.7
Medicine (MD) and medical residency programs	56.0	43.6	67.3
Veterinary medicine (DVM) and veterinary residency programs	41.6	33.3	44.8
Pharmacy, pharmaceutical sciences and administration	50.3	43.2	60.7
Rehabilitation and therapeutic professions	50.9	49.1	58.2
Nursing	48.5	48.1	54.3
Clinical / medical laboratory science and allied professions	52.1	50.9	55.6
Allied health diagnostic, intervention and treatment professions	49.3	45.8	56.0
Dentistry (DDS, DMD) and dental residency programs	49.2	38.5	62.7
Dental support services and allied professions	55.1	48.3	70.3
Law (LLB, JD, BCL) and legal research and advanced professional studies (Post-LLB / JD)	31.6	25.3	37.6
Education programs[2]	26.5	24.8	33.7
Psychology, general and clinical psychology	34.2	29.0	50.3
Social work	38.0	36.3	44.4
Economics	29.0	21.5	38.1
Legal support services and legal professions and studies, other	41.1	40.7	44.4
Linguistic, comparative and related language studies and services	36.9	34.5	44.6
Library science / librarianship	34.8	33.2	42.9
Journalism	35.2	32.4	38.9
Design and applied arts	50.7	42.9	66.1
Cosmetology and related personal grooming services	38.8	34.5	68.5

Table 19 (concluded)

Overall education-job match rates of full-time full-year internationally-educated immigrants aged 25 to 64 by instructional programs and sex, Canada, 2006

	Internationally-educated immigrants		
	All	Women	Men
Instructional programs	overall education-job match rate		
Culinary arts and related services	48.8	35.6	54.7
Carpentry / carpenter	66.2	33.3	66.4
Electrical and power transmission installers	55.6	33.8	56.5
Heavy / industrial equipment maintenance technologies	66.7	40.0	67.1
Vehicle maintenance and repair technologies	51.0	20.7	51.4
Precision metal working	60.9	24.4	62.1

1. Computer programs include computer programming, data processing and data processing technology / technician, information science / studies, computer systems analysis / analyst, computer science, computer software and media applications, computer systems networking and telecommunications, computer / information technology administration and management, and computer and information sciences and support services, other.
2. Education programs include education, general, special education and teaching, student counselling and personnel services, teacher education and professional development, specific levels and methods, and teacher education and professional development, specific subject areas.

Notes: Individuals attending school in 2006 are excluded.
'Overall education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels.

Source: 2006 Census of Population, Statistics Canada.

As shown in Table 19, along with the occupations of geologists, geochemists and geophysicists with a 47 percentage-point difference, the largest education-job match rate gap between male and female immigrants educated abroad were found among those with credentials leading to the identified regulated trades. This may reflect the fact that regulated trades are male-dominated in general in Canada (Skof 2010). As noted by Scullen (2008), limited access is the first hurdle faced by women seeking skilled trade jobs. While progress has been made in certain areas, recruiting and hiring practices that make use of traditional networks (e.g., word of mouth recruitment) often overlook the available pool of women. This may represent an even greater challenge for immigrants who often do not possess social networks upon their arrival in the country and their limited knowledge of and information about the Canadian labour market. Conversely, there was less than a seven-percentage point gender gap among internationally-educated immigrants with credentials leading to occupations in nursing (6 percentage points), secretaries, administrative officers, executive assistants and general office clerks (5 percentage points), medical laboratory technologists and pathologists' assistant (5 percentage points), paralegal and related occupations (4 percentage points), and forestry professionals (less than 1 percentage point).

Country of education and overall education-job match rates

Countries in which internationally-educated immigrants reported receiving their highest credentials also had an impact on the likelihood of working in their field of study. Results from the Census show that, overall, more than 60% of internationally-educated immigrants with credentials from Ireland (70%), New Zealand (66%), Israel (64%) and Australia (63%) reported working in their field of study or in an occupation requiring similar or higher skill levels (Table 20). Conversely, less than 45% of immigrants with credentials from Central America, most of Africa (except the region of Southern Africa), South America, the Caribbean and Bermuda as well as Eastern and Southern Europe found a match within the Canadian labour market for their education.

These results seem to support the statement that "skills generated through education or work experience in some source countries cannot be directly transferred to the Canadian labour market." Language barriers and both real and perceived discrimination may also represent some of the factors influencing the likelihood that an immigrant will be working in their field of study. This may also reflect the fact that Canadian employers do not have sufficient information to be able to assess the quality of education completed in specific countries.

Table 20

Overall education-job match rate: Top 10 countries of education for internationally-educated immigrants aged 25 to 64, Canada, 2006

Country of education	Internationally-educated immigrants	
	number	overall education-job match rate
All countries of education	**365,300**	**41.4**
Top 10 countries of education		
Ireland (Eire)	1,760	69.6
New Zealand	1,595	65.8
Israel	2,740	63.7
Australia	4,045	62.9
United Kingdom	51,820	60.4
Sweden	855	59.8
France	12,440	58.8
United States of America	35,275	58.5
Italy	3,600	56.3
Belgium	1,635	55.8
All regions of education	**365,300**	**41.4**
North America	35,275	58.4
Central America	4,005	29.5
Caribbean and Bermuda	6,235	35.8
South America	11,085	37.9
Europe	**147,355**	**50.1**
Western Europe	28,320	53.7
Eastern Europe	45,640	41.6
Northern Europe	56,060	60.5
Southern Europe	17,325	44.7
Other Europe	15	50.0
Africa	**21,530**	**41.9**
Western Africa	1,770	35.4
Eastern Africa	3,170	33.8
Northern Africa	9,435	37.0
Central Africa	415	23.2
Southern Africa	6,735	69.6
Other Africa	10	22.2
Asia	**133,580**	**33.0**
West Central Asia and the Middle East	18,810	38.8
Eastern Asia	51,315	38.0
Southeast Asia	27,325	25.4
Southern Asia	36,130	31.6
Oceania	6,240	60.3
Other outside Canada	..	..
Distance learning	15	75.0

.. not available for a specific reference period

Notes: Individuals attending school in 2006 are excluded.
'Overall education-job match rate' corresponds to the match between a given instructional program and the best corresponding occupation or an occupation requiring similar or higher skill levels.

Source: 2006 Census of Population, Statistics Canada.

The importance of country of education also appears to vary according to the credential earned. In the case of regulated occupations, for example, more than 90% of immigrants who received their highest education in medicine from New Zealand, Sweden, Australia, the United States and the United Kingdom reported working as physicians or in an occupation requiring similar or higher skill levels. Conversely, less than one quarter of immigrants with medicine credentials from Japan and South Korea reported doing so.

The country of education did not seem to be as important for internationally-educated immigrants with credentials leading to regulated trades. In the case of internationally-educated immigrants with credentials in culinary arts and related services, for example, although education-job match rates were higher for those whose highest educational credential was earned in Oceania (65%), still more than half of immigrants with such credentials from Asia (57%) reported working in the best but not necessarily corresponding occupation.

In the case of credentials leading to non-regulated occupations, the largest overall education-job match rates were found for internationally-educated immigrants from countries in North America, Oceania and Europe.[6]

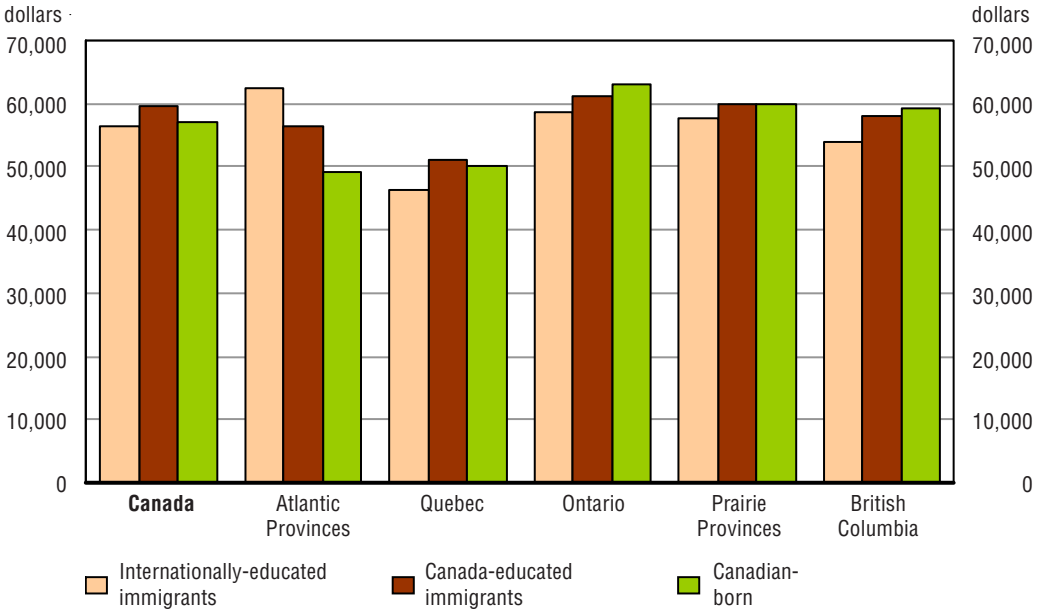
Full-time, full-year earnings and education-job match rates

Even with the same educational background and working on a full-time full-year basis in occupations requiring similar or higher skill levels, internationally-educated immigrants, with earnings of $56,300 in 2005, generally earned slightly less than their Canada-educated counterparts ($59,500) and the Canadian-born with a postsecondary education ($57,200) in 2005. As shown in Chart 1.9, this was true for all provinces with the exception of the Atlantic Provinces. In fact, at $62,300, median earnings of internationally-educated immigrants residing in the Atlantic Provinces were generally higher than those reported by their counterparts educated in Canada ($56,400) or Canadian-born postsecondary graduates ($49,200).

At $58,600 and $57,700 respectively, median earnings for internationally-educated immigrants who reported working on a full-time full-year basis were also slightly above the national average of $56,300 in Ontario and the Prairie Provinces. Their counterparts in Quebec and British Columbia, on the other hand, showed median earnings lower than the national average, at $46,300 and $53,800, respectively (Chart 1.9).

Chart 1.9

Median earnings of individuals aged 25 to 64 who reported working on a full-time full-year basis in the best corresponding occupation or in occupations requiring similar or higher skill levels by immigrant status, location of study and province, 2005



Notes: Individuals attending school in 2006 are excluded.
Median earnings correspond to income received by individuals aged 25 to 64 during calendar year 2005.
Source: 2006 Census of Population, Statistics Canada.

As shown in Table 21, median earnings of internationally-educated immigrants varied according to field of study, ranging from $23,300 for those with credentials in cosmetology and related personal grooming services programs to $109,000 for those with an MD in medicine.

Earnings gaps between immigrants educated abroad and those educated in Canada also varied by field of study. As shown in Table 21, in 2005, the three largest gaps were found among immigrants with credentials leading to the following occupations: physicians ($109,000 vs. $176,000, for a gap of about $67,000), lawyers and Quebec notaries ($60,300 vs. $92,200, for a gap of about $31,900), and dentists ($70,700 vs. $100,200, for a gap of about $29,500).

Conversely, there was less than a $3,000 difference in earnings in 2005 among immigrants with credentials leading to the following occupations: secretaries, administrative officers, executive assistants and general office clerks ($40,000 vs. $38,900); engineering technicians ($55,900 vs. $57,300); physicists and astronomers ($74,200 vs. $74,300); physiotherapists ($63,200 vs. $61,000); dental support services and allied professions ($39,500 vs. $37,200); psychologists ($61,000 vs. $62,200); social workers ($51,400 vs. $51,300); hairstylists and barbers ($23,300 vs. $22,500); chefs and cooks ($33,800 vs. $35,500); construction millwrights, industrial mechanics and heavy-duty equipment mechanics ($64,800 vs. $64,300); automotive service technicians, truck and bus mechanics and mechanical repairers ($47,800 vs. $48,700); and welders and related machine operators, machinists and machining and tooling inspectors, and tool and die maker ($54,800 vs. $55,900).

Table 21

Median earnings of individuals aged 25 to 64 who reported working on a full-time full-year basis in the best corresponding occupation or in occupations requiring similar or higher skill levels by immigrant status, location of study and instructional program, Canada, 2005

Instructional programs	Canadian-born	Internationally-educated immigrants	Canada-educated immigrants
	Median earnings ($)		
All instructional programs leading to targeted occupations	**57,191**	**56,328**	**59,526**
Accounting and related services and finance and financial management services	57,172	46,659	55,789
Human resources management and services	62,654	50,036	60,620
Business operations support and assistant services	35,044	40,409	38,859
Business / commerce, general, business administration, management and operations, and marketing	63,948	50,833	61,005
Engineering programs	83,478	67,211	78,703
City / urban, community and regional planning	70,095	60,141	66,854
Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	61,780	52,814	65,112
Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	60,038	64,964	51,235
Forestry	63,816	55,173	71,589
Agriculture, general and plant sciences	59,411	44,582	65,381
Engineering technologies / technicians programs	59,966	55,908	57,339
Computer programs[1]	55,965	64,174	58,394
Chemistry	72,296	59,123	73,040
Biology, general	62,413	53,847	60,738
Management sciences and quantitative methods	87,642	80,141	75,615
Physics	80,232	74,202	74,282
Physical science technologies / technicians	58,461	44,333	59,344
Medicine (MD) and medical residency programs	165,084	108,950	176,007
Veterinary medicine (DVM) and veterinary residency programs	71,829	59,986	65,736
Pharmacy, pharmaceutical sciences and administration	86,937	80,257	85,975
Rehabilitation and therapeutic professions	57,965	63,207	60,989
Nursing	57,574	63,362	59,906
Clinical / medical laboratory science and allied professions	51,347	44,269	52,074
Allied health diagnostic, intervention and treatment professions	59,277	56,835	64,521
Dentistry (DDS, DMD) and dental residency programs	129,058	70,695	100,173
Dental support services and allied professions	38,263	39,488	37,205
Law (LLB, JD, BCL) and legal research and advanced professional studies (Post-LLB / JD)	98,956	60,256	92,179
Education programs[2]	59,982	53,527	63,454
Psychology, general and clinical psychology	60,883	61,025	62,172
Social work	50,037	51,422	51,314
Economics	80,533	50,004	67,804
Legal support services and legal professions and studies, other	40,591	40,131	45,578
Linguistic, comparative and related language studies and services	58,967	47,810	57,195
Library science / librarianship	63,148	49,961	62,166
Journalism	54,126	44,332	57,485
Design and applied arts	39,999	35,285	40,628
Cosmetology and related personal grooming services	21,430	23,297	22,521
Culinary arts and related services	33,930	33,802	35,541
Carpentry / carpenter	45,836	45,481	50,036
Electrical and power transmission installers	62,299	53,982	61,785
Heavy / industrial equipment maintenance technologies	64,793	64,807	64,344
Vehicle maintenance and repair technologies	47,220	47,834	48,694
Precision metal working	52,452	54,764	55,857

1. Computer programs include computer programming, data processing and data processing technology / technician, information science / studies, computer systems analysis / analyst, computer science, computer software and media applications, computer systems networking and telecommunications, computer / information technology administration and management, and computer and information sciences and support services, other.
2. Education programs include education, general, special education and teaching, student counselling and personnel services, teacher education and professional development, specific levels and methods, and teacher education and professional development, specific subject areas.

Notes: Individuals attending school in 2006 are excluded.
Median earnings correspond to income received by individuals aged 25 to 64 during calendar year 2005.

Source: 2006 Census of Population, Statistics Canada.

Median earnings of full-time full-year internationally-educated immigrants who reported working in the best possible but not necessarily corresponding occupation were much higher than for those who reported working in an occupation for which they were over-qualified ($56,300 vs. $34,300) (Table 21 and Table 22).

Table 22

Median earnings of individuals aged 25 to 64 who reported working on a full-time full-year basis in occupations for which they were over-qualified by immigrant status, location of study and instructional program, Canada, 2005

Instructional programs	Canadian-born	Internationally-educated immigrants	Canada-educated immigrants
	Median earnings ($)		
All instructional programs leading to targeted occupations	**39,124**	**34,324**	**38,642**
Accounting and related services and finance and financial management services	36,769	32,018	36,244
Human resources management and services	43,353	35,236	42,003
Business operations support and assistant services	30,214	29,976	31,934
Business / commerce, general, business administration, management and operations, and marketing	43,036	34,458	40,929
Engineering programs	59,973	39,066	50,114
City / urban, community and regional planning	49,085	32,176	45,776
Architecture (BArch, BA / BSc, MArch, MA / MSc, PhD)	50,005	36,548	44,824
Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	49,102	26,123	46,851
Forestry	50,157	36,970	52,594
Agriculture, general and plant sciences	33,824	28,334	33,819
Engineering technologies / technicians programs	44,093	33,936	40,018
Computer programs[1]	36,150	32,800	35,824
Chemistry	58,047	37,050	47,877
Biology, general	48,695	32,765	47,545
Management sciences and quantitative methods	60,550	32,872	41,740
Physics	50,141	35,180	46,307
Physical science technologies / technicians	47,599	34,880	39,681
Medicine (MD) and medical residency programs	64,840	37,340	49,907
Veterinary medicine (DVM) and veterinary residency programs	39,681	33,281	63,448
Pharmacy, pharmaceutical sciences and administration	50,018	34,305	43,073
Rehabilitation and therapeutic professions	39,161	31,111	38,494
Nursing	32,567	31,648	34,646
Clinical / medical laboratory science and allied professions	32,455	32,645	33,346
Allied health diagnostic, intervention and treatment professions	38,298	25,173	37,945
Dentistry (DDS, DMD) and dental residency programs	28,774	33,282	84,050
Dental support services and allied professions	32,977	28,703	31,198
Law (LLB, JD, BCL) and legal research and advanced professional studies (Post-LLB / JD)	53,234	31,716	46,775
Education programs[2]	37,263	30,164	35,077
Psychology, general and clinical psychology	42,735	32,842	41,465
Social work	36,707	36,827	38,020
Economics	52,127	32,674	41,890
Legal support services and legal professions and studies, other	34,335	24,513	36,658
Linguistic, comparative and related language studies and services	39,486	33,543	41,123
Library science / librarianship	41,594	33,799	41,256
Journalism	37,842	29,440	36,446
Design and applied arts	32,871	28,782	31,279
Cosmetology and related personal grooming services	24,308	28,121	26,430
Culinary arts and related services	30,690	31,133	33,058
Carpentry / carpenter	39,692	37,218	43,588
Electrical and power transmission installers	41,208	35,555	37,811
Heavy / industrial equipment maintenance technologies	46,347	41,000	43,408
Vehicle maintenance and repair technologies	41,151	37,438	39,549
Precision metal working	41,882	39,771	44,111

1. Computer programs include computer programming, data processing and data processing technology / technician, information science / studies, computer systems analysis / analyst, computer science, computer software and media applications, computer systems networking and telecommunications, computer / information technology administration and management, and computer and information sciences and support services, other.
2. Education programs include education, general, special education and teaching, student counselling and personnel services, teacher education and professional development, specific levels and methods, and teacher education and professional development, specific subject areas.

Notes: Individuals attending school in 2006 are excluded.
Median earnings correspond to income received by individuals aged 25 to 64 during calendar year 2005.

Source: 2006 Census of Population, Statistics Canada.

Similar to what was observed earlier, even with the same educational background and working on a full-time full-year basis in occupations for which they are over-qualified, internationally-educated immigrants, with earnings of $34,300 in 2005, generally earned slightly less than their Canada-educated counterparts ($38,600) and the Canadian-born with a postsecondary education ($39,100) (Table 22).

Summary

If one of the main functions of education, obtained either inside or outside the country, is to provide skills that will be used in subsequent employment, then having a poor education-job match rate would be an inefficient use of resources for both individuals and for society as a whole.

Results from the Census show low education-job match rates among internationally-educated immigrants in 2006. In fact, among the 881,600 internationally-educated immigrants who reported a postsecondary credential in a field of study that would normally lead to work in one of the targeted occupations identified by the FCR Program at HRSDC, only about one in five (17%) reported working in the best corresponding occupation. This proportion increased to 41% when considering occupations requiring similar or higher skill levels.

Not surprisingly, internationally-educated immigrants established in Canada for a longer period of time were more likely than more recent immigrants to report working in their field of study or in an equivalent occupation. About 45% of internationally-educated immigrants established in Canada for more than ten years reported working in the best corresponding occupation or in equivalent occupations in 2006 compared to about 42% for recent and 34% for very-recent immigrants. However, even after ten years in Canada, internationally-educated immigrants still trailed the education-job match rate of their Canada-educated counterparts and the Canadian-born by more than 15 percentage points.

The analysis finds that the likelihood of having a good education-job match varies by country from which internationally-educated immigrants reported receiving their highest level of education. Overall, more than 60% of internationally-educated immigrants with credentials from Ireland (70%), New Zealand (66%), Israel (64%) and Australia (63%) reported working in their field of study or in an occupation requiring similar or higher skill levels. On the other hand, internationally-educated immigrants with credentials from countries other than Europe, Oceania, North America, and South Africa had education-job match rates below 45% in 2006.

Not all internationally-educated immigrants faced the same challenges and, depending on the particular occupation they had studied for, some were more likely than others to be working in an associated occupation in 2006. Not surprisingly, immigrants who studied in programs where there was a clear relationship between educational credentials and the ability to meet the requirements to work — such as for most regulated occupations and trades — generally had higher education-job match rates than those who had studied in a field of study for which this relationship was not as direct.

The importance of country of education also varied according to the credential. While more than 90% of immigrants with credentials in medicine from New Zealand, Sweden, Australia, the United States and the United Kingdom reported working as physician or in an occupation requiring similar or higher skill levels. However, this was the case for less than one-quarter of those with similar credentials from Japan and South Korea. The country of education played a less important role in the case of internationally-educated immigrants with credentials leading to the occupations of chef, cook, hairstylist and barber.

Even with the same educational background and when working on a full-time full-year basis in occupations requiring similar or higher skill levels, internationally-educated immigrants, with earnings of $56,300 in 2005, generally earned slightly less than their Canada-educated counterparts ($59,500) and the Canadian-born with a postsecondary education ($57,200). Not surprisingly, median earnings of full-time full-year internationally-educated immigrants who reported working in the best corresponding occupation or in equivalent occupations were much higher than for those who reported working in an occupation for which they were over-qualified ($56,300 vs. $34,300).

Among the characteristics associated with an easier transition of internationally-educated immigrants into the Canadian labour market, men were more likely than women to report working in the best corresponding occupation or in equivalent occupations (49% vs. 33%). Differences are also apparent by age, with internationally-educated individuals aged 35 to 44 and 45 to 54 finding higher match rates than their counterparts in the younger and older age groups (25 to 34 and 55 to 64).

Summary and concluding remarks

Immigration is an increasingly important component of population growth in Canada, with over 200,000 immigrants arriving in Canada each year. Immigrants make an enormous contribution to the pool of people in Canada with postsecondary qualifications.

Upon their arrival, however, internationally-educated immigrants face an adjustment process both in terms of integrating into society at large and finding work related to their field of study. As shown by the 2006 Census, employment rates recorded by core working-age internationally-educated immigrants (75%) were, in general, lower than those recorded by the Canadian-born with a postsecondary education or to immigrants who completed their highest level of education in Canada, both at about 82%.

One important reason for this relative disadvantage is that the skills immigrants have acquired in their home country are often not directly transferable to the host economy. There may also be other skills that immigrants lack when arriving in Canada, such as fluency in either English or French. Recognition of foreign credentials, level of educational attainment, degree and length of experience abroad and within Canada, differences in quality of education in some countries, language barriers and related difficulties, varying strengths of social networks, knowledge of and information about the Canadian labour market and both real and perceived discrimination may also represent some of the factors influencing the labour market outcomes of immigrants compared to those of the Canadian-born. Many internationally-educated newcomers engage in further education and training as they recognize the barriers that exist without Canadian education and experience. In 2006, slightly more than one in five (22%) very-recent internationally-educated immigrants reported attending school. In comparison, about 12% of recent immigrants and 7% of established immigrants aged 25 to 64 who had completed their education abroad reported attending school in 2006.

Although the chances of obtaining employment increase with time, many immigrants have to wait many years before getting a job. In fact, while less than seven in ten (68%) very-recent internationally-educated immigrants reported being employed in 2006, this was the case for about eight in ten recent (79%) and established internationally-educated immigrants (77%) in Canada.

It may also be expected that the longer an immigrant is unable to practice in his or her field of expertise, the more likely he or she will experience "skills atrophy," reducing their chances of finding work in their field of expertise (Lochhead 2002). Economic factors, such as the state of the economy during a particular period of landing, will also play a role in this regard.

Even after having secured employment, internationally-educated immigrants generally earned less than their counterparts educated in Canada and Canadian-born workers with a postsecondary education. In 2005, internationally-educated immigrants working full-time full-year in the core working-age group of 25 to 64 earned $40,800 on average, slightly less than the median earnings reported by their counterparts educated in Canada ($49,000) and full-time full-year Canadian-born workers with a postsecondary education ($49,300).

These results seem to support the argument that the lower earnings of immigrants may often be attributable to the specificity of human capital to the country from which it originates, the argument being that skills generated through education or work experience in the source country cannot be directly transferred to the host country, resulting in apparently well-qualified immigrants holding low-paying jobs.

Information on the proportion of internationally-educated immigrants working in their field of study also is of interest to the various stakeholders, since it provides an indication of recognition (or lack thereof) of foreign credentials and work experience. As shown by the Census, only a small share (17%) of internationally-educated immigrants aged 25 to 64 not attending school in 2006 reported working in an occupation related to their field of study (for example, individuals with credentials in engineering working as engineers). This proportion increased to 41% when considering occupations requiring similar or higher skill levels (for example, individuals with credentials in engineering working as architects or as managers). Nevertheless, this percentage was much lower than the proportion observed for their counterparts educated in Canada (61%) and for the Canadian-born with a postsecondary education (63%).

This gap decreased somewhat over time. About 45% of internationally-educated immigrants established in Canada for more than ten years reported working in the best corresponding occupation or in an occupation requiring similar or higher skill levels in 2006 compared to about 34% for very-recent immigrants. However, even after ten years in Canada, internationally-educated immigrants in the core working-age group of 25 to 64 who reported not attending school in 2006 still trailed the Canadian-born match rate by 18 percentage points (45% vs. 63%).

These lower match rates for internationally-educated immigrants suggest that these individuals face difficulties in having their foreign credentials or previous foreign work experience recognized. Other factors may also contribute to this situation: labour market conditions such as demand for particular occupations; language skills; and personal decisions such as the desire to work in the occupation related to their field of study.

Provincially, the likelihood of working in the best corresponding occupation or in an occupation requiring similar or higher skill levels was highest for internationally-educated immigrants in the Atlantic Provinces (51%) and in regions that had strong labour markets in 2006 such as in Saskatchewan (47%) and Alberta (45%). Canada's largest provinces, Ontario, Quebec and British Columbia had overall education-job match rates that were at about the same as the national average (between 40% and 42%).

Among the characteristics associated with an easier transition of internationally-educated immigrants into the Canadian labour market, men were more likely than women to report working in the 'best possible but not necessarily corresponding occupation' (49% vs. 33%). This was also the case for internationally-educated individuals aged 35 to 44 and 45 to 54 in comparison to their counterparts in the younger and older age groups (25 to 34 and 55 to 64).

Countries from which internationally-educated immigrants reported receiving their highest level of education also had an impact on the likelihood of working or not in their field of study. Overall, more than 60% of internationally-educated immigrants with credentials from Ireland (70%), New Zealand (66%), Israel (64%) and Australia (63%) reported working in their field of study or in an occupation requiring similar or higher skill levels. In contrast, with education-job match rates below 45%, immigrants with credentials from regions other than Europe, Oceania, North America, and Southern Africa experienced greater difficulties in finding jobs in their fields of study or in equivalent occupations.

The role played by country of education also varies by credential held. While more than 90% of immigrants with credentials in medicine from New Zealand, Sweden, Australia, the United States and the United Kingdom reported working as a physician or in an occupation requiring similar or higher skill levels; this was the case for less than one-quarter of those with similar credentials from Japan and South Korea. Country of education did not seem to be as important for internationally-educated immigrants with credentials leading to the occupations of chef, cook, hairstylist and barber.

It is important to note that the analysis discussed in this report is descriptive in nature, presenting a profile, based on data from the 2006 Census, of the socio-demographic characteristics of immigrants to Canada who have a postsecondary education and making comparisons to the Canadian-born with a postsecondary education, whether completed in Canada or abroad. As such, care should be taken in making interpretations based on the findings. This report, as well as previous studies, have established that immigrants, particularly very recent immigrants, have poorer labour market outcomes — lower employment rates and earnings— than the Canadian-born. While various studies have proposed competing explanations of the observed differences, the extent to which each factor contributes to immigrant disadvantage has been debated. This report shows that among immigrants, differences in labour market outcomes also exist between those who were educated outside Canada and those who completed their postsecondary education in Canada.

The next stage of the analysis, which will be discussed in a separate report, will examine the interrelationship between factors in a multivariate framework. This will allow an assessment of the contributions of various factors to the integration of internationally-educated immigrants into the Canadian labour market.

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Appendix 1

Regions and countries of highest postsecondary education

The following Table outlines the detailed grouping of regions and countries of highest postsecondary education.

Census Question 31 "*In what province, territory or country did this person complete his/her highest degree, certificate or diploma*" was used to determine the country in which immigrants received their highest level of educational attainment greater than high school.

Internationally-educated includes all individuals aged 25 to 64 who completed their highest certificate, diploma or degree 'outside Canada,' while **Canada-educated** includes all of those who reported receiving theirs 'in Canada.'

Table A.1.1
Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
Canada-educated	
Canada	Newfoundland and Labrador Prince Edward Island Nova Scotia New Brunswick Quebec Ontario Manitoba Saskatchewan Alberta British Columbia Yukon Northwest Territories Nunavut
Internationally-educated	
North America	United States of America Other North America[1]
Central America	Belize Costa Rica El Salvador Guatemala Honduras Mexico Nicaragua Panama

Table A.1.1 (continued)

Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
Internationally-educated	
Caribbean and Bermuda	Antigua and Barbuda Barbados Bermuda Cuba Dominica Dominican Republic Grenada Haiti Jamaica Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Trinidad and Tobago Other Caribbean and Bermuda[2]
South America	Argentina Bolivia Brazil Chile Columbia Ecuador Guyana Paraguay Peru Suriname Uruguay Venezuela Other South America[3]
Europe	
Western Europe	Austria Belgium France Germany Netherlands Switzerland Other Western Europe[4]
Eastern Europe	Bulgaria Czech Republic Slovakia Czechoslovakia (n.o.s.) Hungary Poland Romania Estonia Latvia Lithuania Belarus Republic of Moldova Russian Federation Ukraine USSR (n.o.s.)
Northern Europe	Ireland (EIRE) Denmark (includes Faroe Islands) Finland Iceland Norway (includes Svalbard and Jan Mayen Islands) Sweden United Kingdom

Table A.1.1 (continued)

Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
	Europe
Southern Europe	Albania Greece Italy Malta Portugal Spain Bosnia and Herzegovina Croatia Macedonia Serbia and Montenegro Slovenia Yugoslavia (n.o.s.) Other Southern Europe[5]
Other Europe	
	Other Africa
Western Africa	Côte d'Ivoire Ghana Guinea Nigeria Senegal Sierra Leone Other Western Africa[6]
Eastern Africa	Burundi Eritrea Ethiopia Kenya Madagascar Mauritius Rwanda Somalia United Republic of Tanzania Uganda Zambia Zimbabwe Other Eastern Africa[7]
Northern Africa	Algeria Egypt Libya Morocco Sudan Tunisia
Central Africa	Angola Cameroon Democratic Republic of the Congo Other Central Africa[8]
Southern Africa	Republic of South Africa Other Southern Africa[9]
Other Africa	
	Asia
West Central Asia and the Middle East	Afghanistan Cyprus Iran Iraq Israel Jordan Kuwait Lebanon Palestine

Table A.1.1 (concluded)
Detailed grouping of regions and countries of highest postsecondary education

High-level and detailed regions of highest postsecondary education	Countries / Provinces of highest postsecondary education
	Asia
	Saudi Arabia
	Syria
	United Arab Emirates
	Turkey
	Kazakhstan
	Uzbekistan
	Armenia
	Azerbaijan
	Other West Central Asia and the Middle East[10]
Eastern Asia	People's Republic of China (including China)
	Special Administrative Region of Hong Kong
	Special Administrative Region of Macau
	Japan
	South Korea (including Korea)
	Taiwan
	Other Eastern Asia[11]
Southeast Asia	Brunei Darussalam
	Cambodia
	Indonesia
	Laos
	Malaysia
	Myanmar
	Philippines
	Singapore
	Thailand
	Viet Nam
Southern Asia	Bangladesh
	India
	Nepal
	Pakistan
	Sri Lanka
	Other Southern Asia[12]
Oceania	Australia
	Fiji
	New Zealand
	Other Oceania[13]
Other outside Canada	
Distance learning[14]	

1. Other North America includes Greenland and Saint Pierre and Miquelon.
2. Other Caribbean and Bermuda category includes Anguilla, Aruba, Bahamas, Cayman Islands, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, Virgin Islands, British, Virgin Islands, U.S. and Other Caribbean.
3. Other South America category includes French Guiana and Other South America.
4. Other Western Europe category includes Liechtenstein, Luxembourg and Monaco.
5. Other Southern Europe category includes Gibraltar and Holy See (Vatican City).
6. Other Western Africa category includes Benin, Burkina Faso, Cape Verde, Gambia, Guinea-Bissau, Liberia, Mali, Mauritania, Niger and Togo.
7. Other Eastern Africa category includes Comoros, Djibouti, Malawi, Mozambique, Réunion and Seychelles.
8. Other Central Africa category includes Central African Republic, Chad, Republic of the Congo and Gabon.
9. Other Southern Africa category includes Botswana, Lesotho, Namibia and Swaziland.
10. Other West Central Asia and the Middle East category includes Bahrain, Oman, Qatar, Yemen, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan.
11. Other Eastern Asia category includes North Korea and Mongolia.
12. Other Southern Asia category includes West Bank and Gaza Strip.
13. Other Oceania category includes Nauru, New Caledonia, Papua New Guinea and Tonga.
14. Internationally-educated includes distance learning.

Appendix 2

Regions and countries of birth

The following Table outlines the detailed grouping of regions and countries of birth.

Census Question 9 "*Where was this person born*" was used to determine the region and country of birth of respondents.

Table A.2.1
Detailed grouping of regions and countries of birth

High-level and detailed regions of birth	Countries / Provinces of birth
Born in Canada	
Canada	Newfoundland and Labrador Prince Edward Island Nova Scotia New Brunswick Quebec Ontario Manitoba Saskatchewan Alberta British Columbia Yukon Northwest Territories Nunavut
Born outside Canada	
North America	United States of America Other North America[1]
Central America	Belize Costa Rica El Salvador Guatemala Honduras Mexico Nicaragua Panama
Caribbean and Bermuda	Antigua and Barbuda Barbados Bermuda Cuba Dominica Dominican Republic Grenada Haiti Jamaica Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Trinidad and Tobago Other Caribbean and Bermuda[2]

Table A.2.1 (continued)
Detailed grouping of regions and countries of birth

High-level and detailed regions of birth	Countries / Provinces of birth
South America	Argentina Bolivia Brazil Chile Columbia Ecuador Guyana Paraguay Peru Suriname Uruguay Venezuela Other South America[3]
	Europe
Western Europe	Austria Belgium France Germany Netherlands Switzerland Other Western Europe[4]
Eastern Europe	Bulgaria Czech Republic Slovakia Czechoslovakia (n.o.s.) Hungary Poland Romania Estonia Latvia Lithuania Belarus Republic of Moldova Russian Federation Ukraine USSR (n.o.s.)
Northern Europe	Ireland (EIRE) Denmark (includes Faroe Islands) Finland Iceland Norway (includes Svalbard and Jan Mayen Islands) Sweden United Kingdom
Southern Europe	Albania Greece Italy Malta Portugal Spain Bosnia and Herzegovina Croatia Macedonia Serbia and Montenegro Slovenia Yugoslavia (n.o.s.) Other Southern Europe[5]

Table A.2.1 (continued)
Detailed grouping of regions and countries of birth

High-level and detailed regions of birth	Countries / Provinces of birth
Africa	
Western Africa	Côte d'Ivoire Ghana Guinea Nigeria Senegal Sierra Leone Other Western Africa[6]
Eastern Africa	Burundi Eritrea Ethiopia Kenya Madagascar Mauritius Rwanda Somalia United Republic of Tanzania Uganda Zambia Zimbabwe Other Eastern Africa[7]
Northern Africa	Algeria Egypt Libya Morocco Sudan Tunisia Western Sahara
Central Africa	Angola Cameroon Democratic Republic of the Congo Other Central Africa[8]
Southern Africa	Republic of South Africa Other Southern Africa[9]
Asia	
West Central Asia and the Middle East	Afghanistan Cyprus Iran Iraq Israel Jordan Kuwait Lebanon Palestine/West Bank/Gaza Strip Saudi Arabia Syria United Arab Emirates Turkey Kazakhstan Uzbekistan Armenia Azerbaijan Other West Central Asia and the Middle East[10]
Eastern Asia	People's Republic of China Special Administrative Region of Hong Kong Special Administrative Region of Macau Japan South Korea Taiwan Other Eastern Asia[11]

Table A.2.1 (concluded)
Detailed grouping of regions and countries of birth

High-level and detailed regions of birth	Countries / Provinces of birth
	Asia
Southeast Asia	Brunei Darussalam Cambodia East Timor Indonesia Laos Malaysia Myanmar Philippines Singapore Thailand Viet Nam
Southern Asia	Bangladesh India Nepal Pakistan Sri Lanka Other Southern Asia[12]
Oceania	Australia Fiji New Zealand Other Oceania[13]
Other outside Canada[14]	

1. Other North America includes Greenland and Saint Pierre and Miquelon.
2. Other Caribbean and Bermuda category includes Anguilla, Aruba, Bahamas, Cayman Islands, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, Turks and Caicos Islands, Virgin Islands, British and Virgin Islands, U.S.
3. Other South America category includes Falkland Islands (Malvinas) and French Guiana.
4. Other Western Europe category includes Liechtenstein, Luxembourg and Monaco.
5. Other Southern Europe category includes Andorra, Gibraltar, Holy See (Vatican City) and San Marino.
6. Other Western Africa category includes Benin, Burkina Faso, Cape Verde, Gambia, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Saint Helena and Togo.
7. Other Eastern Africa category includes Comoros, Djibouti, Malawi, Mayotte, Mozambique, Réunion and Seychelles.
8. Other Central Africa category includes Central African Republic, Chad, Republic of the Congo, Equatorial Guinea, Gabon and Sao Tome and Principe.
9. Other Southern Africa category includes Botswana, Lesotho, Namibia and Swaziland.
10. Other West Central Asia and the Middle East category includes Bahrain, Oman, Qatar, Yemen, Kyrgyzstan, Tajikistan, Turkmenistan and Georgia.
11. Other Eastern Asia category includes North Korea and Mongolia.
12. Other Southern Asia category includes Bhutan and Maldives.
13. Other Oceania category includes American Samoa, Cook Islands, French Polynesia, Guam, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, New Caledonia, Palau, Papua New Guinea, Pitcairn, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu and Wallis and Futuna.
14. Other category includes places of birth not classified elsewhere. Principally includes those born at sea.

Appendix 3

List of targeted occupations

The following Tables outline the targeted occupations as identified by the FCR Program at HRSDC using the 2006 National Occupational Classification – Statistics (NOC-S 2006).

The FCR Program at HRSDC is to develop a coherent, transparent, fair, accessible and rigorous foreign credential assessment and recognition process that would enhance labour market outcomes of internationally-educated immigrants in targeted occupations and sectors of activities.

Table A.3.1

Top regulated occupations as identified by the FCR Program at HRSDC

NOC-S	Occupations
C03-C04[1,2]	Engineers
C073	Software engineers and designers
C13-C14[1]	Engineering technicians
B011	Financial auditors and accountants
E13	Secondary and elementary school teachers and educational counsellors
D011-D012[1]	Physicians
F025	Translators, terminologists and interpreters
D031	Pharmacists
C023	Agricultural representatives, consultants and specialists
D11[3]	Nurse supervisors and registered nurses
D233	Licensed practical nurses
D211	Medical laboratory technologists and pathologists' assistant
C051	Architects
C013	Geologists, geochemists and geophysicists
D014	Veterinarians
E012	Lawyers and Quebec notaries
D013	Dentists
D22	Technical occupations in dental health care
D311	Dental assistants
D042	Physiotherapists
E022	Social workers
E034	Social policy researchers, consultants and program officers
E021	Psychologists
D215	Medical radiation technologists
C053	Urban and land use planners
C022	Forestry professionals

1. Not a standard NOC-S category.
2. Skilled immigrants are concentrated in civil engineers (C031), mechanical engineers (C032) and in electrical and electronics engineers (C033).
3. Skilled immigrants are concentrated in registered nurses (D112).

Table A.3.2
Top non-regulated occupations as identified by the FCR Program at HRSDC

NOC-S	Occupations
C071+C072+C074+C075+C181[1,2,3]	Computer programmers and related occupations
E112	Post-secondary teaching and research assistants
B022	Professional occupations in business services to management
A13	Sales, marketing and advertising managers
G121	Technical sales specialists, wholesale trade
B012	Financial and investment analysts
E033	Business development officers and marketing researchers and consultants
C012	Chemists
A111	Financial managers
E111	University professors
C021	Biologists and related scientists
B211	Secretaries (except legal and medical)
B311	Administrative officers
A302	Banking, credit and other investment managers
E121	College and other vocational instructors
B315	Purchasing agents and officers
A122	Computer and information system managers
E032	Economists and economic policy researchers and analysts
B313	Personnel and recruitment officers
G111	Sales representatives, wholesale trade (non-technical)
C111	Chemical technologists and technicians
E211	Paralegal and related occupations
B312	Executive assistants
A211	Retail trade managers
C061	Mathematicians, statisticians and actuaries
F141	Graphic designers and illustrators
B531	Accounting and related clerks
C011	Physicists and astronomers
F022	Editors
B014	Other financial officers
A121	Engineering managers
E038	Other professional occupations in social science, n.e.c.
B021	Specialists in human resources
A114	Other administrative services managers
F023	Journalists
C121	Biological technologists and technicians
A112	Human resources managers
B511	General office clerks
F011	Librarians
E212	Community and social service workers
E035	Education policy researchers, consultants and program officers
C015	Other professional occupations in physical sciences

1. Not a standard NOC-S category.
2. Skilled immigrants are concentrated in information systems analysts and consultants (C071).
3. Includes computer network technicians (C181) and excludes software engineers and designers (C073).

Table A.3.3
Top regulated trades as identified by the FCR Program at HRSDC

NOC-S	Occupations
G411	Chefs
G412	Cooks
H212	Industrial electricians
H311	Machinists and machining and tooling inspectors
H312	Tool and die maker
H421	Automotive service technicians, truck and bus mechanics and mechanical repairers
A371	Construction managers
H214	Electrical power line and cable workers
H326	Welders and related machine operators
H211	Electricians (except industrial and power system)
H121	Carpenters
G911	Hairstylists and barbers
H412	Heavy-duty equipment mechanics
H411	Construction millwrights and industrial mechanics (except textile)

Appendix 4

Classification of occupations by skill levels and skill types

The following Table is an adaptation of the *National Occupational Classification Matrix* developed by HRSDC in 2006 (i.e., concordance from the National Occupational Classification (NOC) used by HRSDC to the National Occupational Classification – Statistics (NOC-S) used by Statistics Canada). It provides an overview of the entire occupational classification structure based on "skill levels" and "skill types". Please follow this link to access the original NOC Matrix 2006 as developed by HRSDC: http://www5.hrsdc.gc.ca/NOC/English/NOC/2006/pdf/Matrix.pdf.

Table A.4.1
Classification of occupations by skill levels and skill types, NOC-S 2006

Major group	Occupations (NOC-S 2006)	Skill type	Skill level
00 – Senior management occupations	A01 – Legislators and senior management	0 – All occupational categories	0 – Management occupations
10 – Management occupations in business, finance and administration	A11 – Administrative services managers A30 – Managers in financial and business services A31 – Managers in communication (except broadcasting)	1 – Business, finance and administration occupations	0 – Management occupations
11 – Professional occupations in business and finance	B01 – Auditors, accountants and investment professionals B02 – Human resources and business service professionals	1 – Business, finance and administration occupations	1 – Skill level A
12 – Skilled administrative and business occupations	B41 – Clerical supervisors B31 – Administrative and regulatory occupations B11 – Finance and insurance administrative occupations B21 – Secretaries, recorders and transcriptionists	1 – Business, finance and administration occupations	2 – Skill level B
14 – Clerical occupations	B51 – Clerical occupations, general office skills B52 – Office equipment operators B53 – Finance and insurance clerks B54 – Administrative support clerks B55 – Library, correspondence and related information clerks B56 – Mail and message distribution occupations B57 – Recording, scheduling and distributing occupations	1 – Business, finance and administration occupations	3 – Skill level C
20 – Management occupations in natural and applied sciences	A12 – Managers in engineering, architecture, science and information systems	2 – Natural and applied sciences and related occupations	0 – Management occupations
21 – Professional occupations in natural and applied sciences	C01 – Physical science professionals C02 – Life science professionals C03 – Civil, mechanical, electrical and chemical engineers C04 – Other engineers C05 – Architects, urban planners and land surveyors C06 – Mathematicians, statisticians and actuaries C07 – Computer and information systems professionals	2 – Natural and applied sciences and related occupations	1 – Skill level A

Table A.4.1 (continued)

Classification of occupations by skill levels and skill types, NOC-S 2006

Major group	Occupations (NOC-S 2006)	Skill type	Skill level
22 – Technical occupations related to natural and applied sciences	C11 – Technical occupations in physical sciences C12 – Technical occupations in life sciences C13 – Technical occupations in civil, mechanical and industrial engineering C14 – Technical occupations in electronics and electrical engineering C15 – Technical occupations in architecture, drafting, surveying and mapping C16 – Other technical inspectors and regulatory officers C17 – Transportation officers and controllers C18 – Technical occupations in computer and information systems	2 – Natural and applied sciences and related occupations	2 – Skill level B
30 – Managers in health, social science, education, government service and religion	A32 – Managers in health, education, social and community services A33 – Managers in public administration	3 – Health occupations (4 – Occupations in social science, education, government service and religion)	0 – Management occupations
31 – Professional occupations in health	D01 – Physicians, dentists and veterinarians D02 – Optometrists, chiropractors and other health diagnosing and treating professionals D03 – Pharmacists, dietitians and nutritionists D04 – Therapy and assessment professionals D11 – Nurse supervisors and registered nurses	3 – Health occupations	1 – Skill level A
32 – Technical and skilled occupations in health	D21 – Medical technologists and technicians (except dental health) D22 – Technical occupations in dental health care D23 – Other technical occupations in health care (except dental)	3 – Health occupations	2 – Skill level B
34 – Assisting occupations in support of health services	D31 – Assisting occupations in support of health services	3 – Health occupations	3 – Skill level C
41 – Professional occupations in social science, education, government services and religion	E01 – Judges, lawyers and Quebec notaries E11 – University professors and assistants E12 – College and other vocational instructors E13 – Secondary and elementary school teachers and educational counsellors E02 –Psychologists, social workers, counsellors, clergy and probation officers E03 – Policy and program officers, researchers and consultants	4 – Occupations in social science, education, government service and religion	1 – Skill level A
42 – Paraprofessional occupations in law, social services, education and religion	E21 – Paralegals, social services workers and occupations in education and religion, n.e.c.	4 – Occupations in social science, education, government service and religion	2 – Skill level B
50 – Management occupations in arts, culture, recreation and sport	A34 – Managers in art, culture, recreation and sport	5 – Occupations in arts, culture, recreation and sport	0 – Management occupations
51 – Professional occupations in art and culture	F01 – Librarians, archivists, conservators and curators F02 – Writing, translating and public relations professionals F03 – Creative and performing artists	5 – Occupations in arts, culture, recreation and sport	1 – Skill level A
52 – Technical and skilled occupations in art, culture, recreation and sport	F11 – Technical occupations in libraries, archives, museums and art galleries F12 – Photographers, graphic arts technicians and technical broadcasting and co-ordinating occupations in motion pictures, and the performing arts F13 – Announcers and other performers F14 – Creative designers and craftspersons F15 – Athletes, coaches, referees and related occupations	5 – Occupations in arts, culture, recreation and sport	2 – Skill level B

Table A.4.1 (continued)

Classification of occupations by skill levels and skill types, NOC-S 2006

Major group	Occupations (NOC-S 2006)	Skill type	Skill level
60 – Management occupations in sales and service	A13 – Sales, marketing and advertising managers A21 – Managers in retail trade A22 – Managers in food service and accommodation A35 – Managers in protective service A36 – Managers in other services	6 – Sales and service occupations	0 – Management occupations
62 – Skilled sales and service occupations	G01 – Sales and service supervisors G12 – Technical sales specialists, wholesale trade G13 – Insurance and real estate sales occupations and buyers G41 – Chefs and cooks G61 – Police officers and firefighters G91 – Technical occupations in personal service	6 – Sales and service occupations	2 – Skill level B
64 – Intermediate sales and service occupations	G11 – Sales representatives, wholesale trade G21 – Retail salespersons and sales clerks G71 – Occupations in travel and accommodation G72 – Tour and recreational guides and casino occupations G51 – Occupations in food and beverage service G62 – Other occupations in protective service G81 – Childcare and home support workers G92 – Other occupations in personal service	6 – Sales and service occupations	3 – Skill level C
66 – Elemental sales and service occupations	G31 – Cashiers G97 – Other sales and related occupations G96 – Food counter attendants, kitchen helpers and related occupations G63 – Security guards and related occupations G93 – Cleaners G73 – Other occupations in travel, accommodation, amusement and recreation G98 – Other elemental service occupations	6 – Sales and service occupations	4 – Skill level D
70 – Management occupations in trades, transport and equipment operation	A37 – Managers in construction and transportation A14 – Facility operation and maintenance managers	7 – Trades, transport and equipment operators and related occupations	0 – Management occupations
72 – Trades and skilled transport and equipment operators	H01 – Contractors and supervisors, trades and related workers H02 – Supervisors, railway and motor transportation occupations H31 – Machinists and related occupations H21 – Electrical trades and telecommunication occupations H11 – Plumbers, pipefitters and gas fitters H32 – Metal forming, shaping and erecting trades H12 – Carpenters and cabinetmakers H13 – Masonry and plastering trades H14 – Other construction trades H41 – Machinery and transportation equipment mechanics (except motor vehicle) H42 – Automotive service technicians H43 – Other mechanics H51 – Upholsterers, tailors, shoe repairers, jewellers and related occupations H22 – Stationary engineers and power station and system operators H72 – Train crew operating occupations H62 – Crane operators, drillers and blasters H52 – Printing press operators, commercial divers and other trades and related occupations, n.e.c.	7 – Trades, transport and equipment operators and related occupations	2 – Skill level B
74 – Intermediate occupations in transport, equipment operation, installation and maintenance	H71 – Motor vehicle and transit drivers H61 – Heavy equipment operators H73 – Other transport equipment operators and related workers H53 – Other installers, repairers and servicers H81 – Longshore workers and material handlers	7 – Trades, transport and equipment operators and related occupations	3 – Skill level C

Table A.4.1 (concluded)

Classification of occupations by skill levels and skill types, NOC-S 2006

Major group	Occupations (NOC-S 2006)	Skill type	Skill level
76 – Trades helpers, construction labourers and related occupations	H82 – Trades helpers and labourers H83 – Public works and other labourers, n.e.c.	7 – Trades, transport and equipment operators and related occupations	4 – Skill level D
80 – Management occupations in primary industry	A38 – Managers in primary production (except agriculture)	8 – Occupations unique to primary industry	0 – Management occupations
82 – Skilled occupations in primary industry	I11 – Supervisors, logging and forestry I12 – Supervisors, mining, oil and gas I13 – Underground miners, oil and gas drillers and related workers I15 – Logging machinery operators I01 – Contractors, operators and supervisors in agriculture, horticulture and aquaculture I17 – Fishing vessel masters and skippers and fishermen / women	8 – Occupations unique to primary industry	2 – Skill level B
84 – Intermediate occupations in primary industry	I14 – Mine service workers and operators in oil and gas drilling I16 – Logging and forestry workers I02 – Agriculture and horticulture workers I18 – Other fishing and trapping occupations	8 – Occupations unique to primary industry	3 – Skill level C
86 – Labourers in primary industry	I21 – Primary production labourers	8 – Occupations unique to primary industry	4 – Skill level D
90 – Management occupations in processing, manufacturing and utilities	A39 – Managers in manufacturing and utilities	9 – Occupations unique to processing, manufacturing and utilities	0 – Management occupations
92 – Processing, manufacturing and utilities supervisors and skilled operators	J01 – Supervisors, processing occupations J02 – Supervisors, assembly and fabrication J11 – Central control and process operators in manufacturing and processing	9 – Occupations unique to processing, manufacturing and utilities	2 – Skill level B
94 – Processing and manufacturing machine operators and assemblers	J12 – Machine operators and related workers in metal and mineral products processing J13 – Machine operators and related workers in chemical, plastic and rubber processing J14 – Machine operators and related workers in pulp and paper production and wood processing J15 – Machine operators and related workers in textile processing J16 – Machine operators and related workers in fabric, fur and leather products manufacturing J17 – Machine operators and related workers in food, beverage and tobacco processing J18 – Printing machine operators and related occupations J21 – Mechanical, electrical and electronics assemblers J22 – Other assembly and related occupations J19 – Machining, metalworking, woodworking and related machine operators	9 – Occupations unique to processing, manufacturing and utilities	3 – Skill level C
96 – Labourers in processing, manufacturing and utilities	J31 – Labourers in processing, manufacturing and utilities	9 – Occupations unique to processing, manufacturing and utilities	4 – Skill level D

Notes: Skill level A corresponds to occupations that usually require university education.
Skill level B corresponds to occupations that usually require college education or apprenticeship training.
Skill level C corresponds to occupations that usually require secondary school and/or occupation-specific training.
Skill level D corresponds to occupations for which on-the-job training is usually provided.

Source: National Occupational Classification Matrix 2006, HRSDC (http://www5.hrsdc.gc.ca/NOC/English/NOC/2006/pdf/Matrix.pdf).

Appendix 5

Concordance between instructional programs and targeted occupations

In order to determine if an individual is working in the corresponding field of study or not, the first step undertaken by the Center for Education Statistics at Statistics Canada was to develop a concordance file between "instructional programs" and "intended occupations" using the 2006 Census distribution of Canada-educated individuals aged 25 to 64.

The instructional programs leading to the targeted occupations as identified by the FCR Program at HRSDC were selected based on the best possible match between a given occupation and the instructional program using the 2001 Classification of Instructional Programs (CIP) and the 2006 National Occupational Classification – Statistics (NOC-S).

For most of regulated occupations and regulated trades, the selection of a specific instructional program was obvious to find as, for a majority of them, there was a clear relationship between educational credentials and the ability to meet the requirements to work in the associated occupation.

In the case of non-regulated occupations, however, the selection of a specific instructional program was not as obvious. Given the nature of these occupations, the relationship between field of study and occupation is not as definite. In fact, unregulated occupations often draw on workers from various fields of study (workers in administration present, for example, different educational and personal background and the selection of a unique instructional program leading to this occupation was almost impossible).

The following Table presents the best possible matches between an instructional program and the occupations identified by the FCR Program at HRSDC using the 2006 Census distribution of Canada-educated individuals aged 25 to 64.

Table A.5.1

Concordance between instructional programs and targeted occupations (regulated occupations (R), non-regulated occupations (NR) and regulated trades (RT))

Instructional programs		Targeted occupations	
CIP	Name	NOC-S	Name
01.00 01.11	Agriculture, general Plant sciences	C023	Agricultural representatives, consultants and specialists (R)
03.05	Forestry	C022	Forestry professionals (R)
04.02	Architecture (BArch, BA / BSc, March, MA / MSc, PhD)	C051	Architects (R)
04.03	City / urban, community and regional planning	C053	Urban and land use planners (R)
04.06	Landscape architecture (BSc, BSLA, BLA, MSLA, MLA, PhD)	C013	Geologists, geochemists and geophysicists (R)
09.04	Journalism	F023 F022	Journalists (NR) Editors (NR)
11.01 11.02 11.03 11.04 11.05 11.07 11.08 11.09 11.10 11.99	Computer and information sciences and support Services, general Computer programming Data processing and data processing Technology / technician Information science / studies Computer systems analysis / analyst Computer science Computer software and media applications Computer systems networking and telecommunications Computer / information technology administration and management Computer and information sciences and support services, other	A122 C07 C181	Computer and information system managers (NR) Computer and information systems professionals[1] (NR) Computer network technicians (NR)
12.04	Cosmetology and related personal grooming services	G911	Hairstylists and barbers (RT)
12.05	Culinary arts and related services	G411 G412	Chefs (RT) Cooks (RT)
13.01 13.10 13.11 13.12 13.13	Education, general Special education and teaching Student counselling and personnel services Teacher education and professional development, specific levels and methods Teacher education and professional development, specific subject areas	E13 E035 E111 E121	Secondary and elementary school teachers and educational counsellors[2] (R) Education policy researcher, consultants and program officers (NR) University professors (NR) College and other vocational instructors (NR)
14.00	Engineering[3]	C03 + C04 C073 A121	Engineers[4] (R) Software engineers and designers (R) Engineering managers (R)
15.00	Engineering technologies / technicians programs[5]	C13 + C14	Engineering technicians[6] (R)
16.01	Linguistic, comparative and related language studies and services	F025	Translators, terminologists and interpreters (R)
22.01 22.02	Law (LLB, JD, BCL) Legal research and advanced professional studies (Post-LLB / JD)	E012	Lawyers and Quebec notaries (R)
22.03 22.99	Legal support services Legal professions and studies, other	E211	Paralegal and related occupations (NR)
25.01	Library science / librarianship	F011	Librarians (NR)
26.01	Biology, general	C021 C121	Biologists and related scientists (NR) Biological technologists and technicians (NR)

Table A.5.1 (continued)

Concordance between instructional programs and targeted occupations (regulated occupations (R), non-regulated occupations (NR) and regulated trades (RT))

Instructional programs		Targeted occupations	
CIP	Name	NOC-S	Name
40.05	Chemistry	C012	Chemists (NR)
40.08	Physics	C011	Physicists and astronomers (NR)
41.03	Physical science technologies / technicians	C111	Chemical technologists and technicians (NR)
42.01 42.02	Psychology, general Clinical psychology	E021	Psychologists (R)
44.07	Social work	E022 E034 E212	Social workers (R) Social policy researchers, consultants and program officers (R) Community and social service workers (NR)
45.06	Economics	E032	Economists and economic policy researchers and analysts (NR)
46.02	Carpentry / carpenter	H121 A371	Carpenters (RT) Construction managers (RT)
46.03	Electrical and power transmission installers	H211 H212 H214	Electricians (except industrial and power system) (RT) Industrial electricians (RT) Electrical power line and cable workers (RT)
47.03	Heavy / industrial equipment maintenance technologies	H411 H412	Construction millwrights and industrial mechanics (except textile) (RT) Heavy-duty equipment mechanics (RT)
47.06	Vehicle maintenance and repair technologies	H421	Automotive service technicians, truck and bus mechanics and mechanical repairers (RT)
48.05	Precision metal working	H326 H311 H312	Welders and related machine operators (RT) Machinists and machining and tooling inspectors (RT) Tool and die maker (RT)
50.04	Design and applied arts	F141	Graphic designers and illustrators (NR)
51.04 60.01	Dentistry (DDS, DMD) Dental residency programs	D013	Dentists (R)
51.06	Dental support services and allied professions	D22 D311	Technical occupations in dental health care[7] (R) Dental assistants (R)
51.09	Allied health diagnostic, intervention and treatment professions	D215	Medical radiation technologists (R)
51.10	Clinical / medical laboratory science and allied professions	D211	Medical laboratory technologists and pathologists' assistant (R)
51.12 60.02	Medicine (MD) Medical residency programs	D011 + D012	Physicians[8] (R)
51.16	Nursing	D11 D233	Nurse supervisors and registered nurses[9] (R) Licensed practical nurses (R)
51.20	Pharmacy, pharmaceutical sciences and administration	D031	Pharmacists (R)
51.23	Rehabilitation and therapeutic professions	D042	Physiotherapists (R)
51.24 60.03	Veterinary medicine (DVM) Veterinary residency programs	D014	Veterinarians (R)

Table A.5.1 (concluded)

Concordance between instructional programs and targeted occupations (regulated occupations (R), non-regulated occupations (NR) and regulated trades (RT))

Instructional programs		Targeted occupations	
CIP	Name	NOC-S	Name
52.01	Business / commerce, general	A114	Other administrative services managers (NR)
52.02	Business administration, management and operations	A13	Sales, marketing and advertising managers (NR)
		A211	Retail trade managers (NR)
52.14	Marketing	B022	Professional occupations in business services to management (NR)
		E033	Business development officers and marketing researchers and consultants (NR)
		B315	Purchasing agent and officers (NR)
		G111	Sales representatives, wholesale trade (non-technical) (NR)
		G121	Technical sales specialists, wholesale trade (NR)
52.03	Accounting and related services	B011	Financial auditors and accountants (R)
52.08	Finance and financial management services	B012	Financial and investment analysts (NR)
		B014	Other financial officers (NR)
		A111	Financial managers (NR)
		A302	Banking, credit and other investment managers (NR)
		B531	Accounting and related clerks (NR)
52.04	Business operations support and assistant services	B211	Secretaries (except legal and medical) (NR)
		B311	Administrative officers (NR)
		B312	Executive assistants (NR)
		B511	General office clerks (NR)
52.10	Human resources management and services	B021	Specialists in human resources (NR)
		A112	Human resources managers (NR)
		B313	Personnel and recruitment officers (NR)
52.13	Management sciences and quantitative methods	C061	Mathematicians, statisticians and actuaries (NR)
No specific instructional program leads to the following occupations.		C015	Other professional occupations in physical sciences (NR)
		E038	Other professional occupations in social sciences, n.e.c. (NR)
		E112	Post-secondary teaching, and research assistants (NR)

1. Computer and information systems professionals include: Information systems analysts and consultants, database analysts and data administrators, software engineers and designers, computer programmers and interactive media developers, and web designers and developers.
2. Secondary and elementary school teachers and educational counsellors include secondary school teachers, elementary school and kindergarten teachers, and educational counsellors.
3. Engineering programs include: Engineering, general, aerospace, aeronautical and astronautical engineering, agricultural / biological engineering and bioengineering, architectural engineering, biomedical / medical engineering, ceramic sciences and engineering, chemical engineering, civil engineering, computer engineering, electrical, electronics and communications engineering, engineering mechanics, engineering physics, engineering science, environmental / environmental health engineering, materials engineering, mechanical engineering, metallurgical engineering, mining and mineral engineering, naval architecture and marine engineering, nuclear engineering, ocean engineering, petroleum engineering, systems engineering, textile sciences and engineering, materials science, polymer / plastics engineering, construction engineering, forest engineering, industrial engineering, manufacturing engineering, operations research, surveying engineering, geological / geophysical engineering, and engineering, other.
4. Engineers include civil, mechanical, electrical and chemical engineers and other engineers.
5. Engineering technologies / technicians programs include: Technical occupations in civil, mechanical and industrial engineering and technical occupations in electronics and electrical engineering.
6. Engineering technicians include technical occupations in civil, mechanical and industrial engineering and technical occupations in electronics and electrical engineering.
7. Technical occupations in dental health care include denturists, dental hygienists and dental therapists, and dental technologists, technicians and laboratory bench workers.
8. Physicians include specialist physicians and general practitioners and family physicians.
9. Nurse supervisors and registered nurses include head nurses and supervisors and registered nurses.

Endnotes

1. Where information on the productivity or language ability of the individual is difficult to obtain, and hence decisions regarding hiring, for example, are made based on the employer's notion (real or perceived, correct or incorrect) of the characteristics, such as language proficiency or productivity levels of the group to which the individual belongs, rather those of the individual (Picot and Hou 2009).
2. Where employers, customers or colleagues prefer people of one group over that of another, independent of any considerations regarding productivity, work ethic, etc (Picot and Hou 2009).
3. Although 'Occupational therapists' was part of the occupations selected through the *Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications*, this occupation was not identified by the FCR Program and HRSDC and is thus, excluded from the present analysis.
4. For the purposes of this commitment, the assessment and recognition process begins when an individual presents required documentation to the relevant regulatory authority. This point is typically marked by the payment of fees. The commitment is met when a qualifications recognition decision is communicated to the applicant.
5. For additional information on occupations of internationally-educated immigrants not working in their field of study or in occupations requiring at least the same skill level by type of credentials, please contact Client Services, Tourism and the Centre for Education Statistics, Ottawa, Ontario, K1A 0T6 (telephone: (613) 951-7608; toll free at 1- 800-307-3382; by fax at (613) 951-4441; or e-mail: educationstats@statcan.gc.ca.
6. For additional data on match rates of internationally-educated immigrants by instructional program and country of education, please contact Client Services, Tourism and the Centre for Education Statistics, Ottawa, Ontario, K1A 0T6 (telephone: (613) 951-7608; toll free at 1- 800-307-3382; by fax at (613) 951-4441; or e-mail: educationstats@statcan.gc.ca.

Culture, Tourism and the Centre for Education Statistics

Research Papers

Cumulative index

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The **Culture Statistics Program** creates and disseminates timely and comprehensive information on the culture sector in Canada. The program manages a dozen regular census surveys and databanks to produce data that support policy decision and program management requirements. Issues include the economic impact of culture, the consumption of culture goods and services, government, personal and corporate spending on culture, the culture labour market, and international trade of culture goods and services. Analysis is also published in *Focus on Culture* (87-004-XIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=87-004-X).

The **Tourism Statistics Program** provides information on domestic and international tourism. The program covers the Canadian Travel Survey and the International Travel Survey. Together, these surveys shed light on the volume and characteristics of trips and travellers to, from and within Canada.

The **Centre for Education Statistics** develops and delivers a comprehensive program of pan-Canadian education statistics and analysis in order to support policy decisions and program management, and to ensure that accurate and relevant information concerning education is available to the Canadian public and to other educational stakeholders. The Centre conducts fifteen institutional and over ten household education surveys. Analysis is also published in *Education Matters* (81-004-XIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=81-004-X), and in the *Analytical Studies Branch research paper series* (11F0019MIE, free, http://www.statcan.ca/bsolc/english/bsolc?catno=11F0019M).

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