

Citizenship Knowledge Test Results

—Findings from Multivariate Regression Analysis

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After the introduction of a new citizenship knowledge test in March 2010, the test pass rate experienced a sharp decline, from 96% in 2008 to 83% in 2011. Concerns have been expressed by the media and stakeholders about the lower pass rates and, in particular, the citizenship preparation needs of certain vulnerable groups. Another concern expressed was that the knowledge test may be creating a barrier to naturalization or may, for certain demographic groups, delay the decision to naturalize because of difficulty in learning the content and concepts in the citizenship study guide.

This study uses multivariate regression to estimate the effect of applicant characteristics on the citizenship knowledge test outcomes (pass or fail) and to identify which characteristics are associated with failing the written citizenship knowledge test.

Data: The sample of analysis comprises all applicants for Canadian citizenship aged between 18 and 54, who wrote the citizenship test in 2011. Where an applicant wrote the test more than once in 2011, only the results of the first test are included for analysis. After the exclusion of records with missing values, the resulting sample size is 146,550. The appendix provides descriptive statistics of the sample.

Methodology: Multivariate logistic regression models are used to assess the relationship between the citizenship test outcomes (pass or fail) and applicant's individual characteristics. The following variables are included in the multivariate regression analysis: gender, educational attainment at time of landing, immigration admission category, place of birth, age at test, age at time of landing, self-reported official language ability at time of landing, mother tongue and marital status at time of citizenship application.

Main findings: Regression results show that, after controlling for the effect of other individual characteristics in the model, a few individual characteristics are strongly associated with the citizenship test outcome. Among these characteristics, educational attainment stands out as the most important predictor of the test pass rate. The adjusted pass rate for immigrants with a university degree or

above at time of landing is considerably higher than those with lower educational attainment. Differences across immigration categories and countries of birth are also large. While applicants in the economic immigration categories obtain the highest adjusted test pass rates, applicants in the refugee immigration categories obtain the lowest test pass rates. Applicants born in Afghanistan, Vietnam, Iraq, Algeria, Jamaica, India and Sri Lanka have the lowest adjusted pass rates. Variables showing modest effect on the pass rate include: age at test, age at landing, official language ability at landing and mother tongue. The differences in test pass rates across categories of all variables are more pronounced for those with lower educational attainment.

Educational attainment at time of landing

- Overall, the test pass rate increases with an applicant's educational attainment at time of landing. The pass-rate for applicants with Bachelor's degrees or above is about 20 percentage points higher than those with secondary or less education and 8 percentage points higher than those with trades/diploma/apprenticeship schooling, but 3 percentage points lower than those with Master or Doctorate degrees.

Predicted Test Pass Rate: Difference from Bachelor's Degree* (difference in % points)

| | |
|-------------------|-------|
| Secondary or less | -19.6 |
| Trades/diploma** | -7.6 |
| Master/Doctorate | 2.8 |

* Including Bachelor's degree or first professional degree and some post graduates but no further degree.

** Including formal trade certificate, diploma or apprenticeship, other non-university certificate or diploma and some university, no degree.

- Furthermore, educational attainment has an impact on the effect of other variables; the effect of such variables—immigration category and country of birth—on the test pass rate is much larger for applicants with low educational attainment than for those with high educational attainment.



Figure 1: Predicted test pass rates by educational attainment at landing and by immigration category

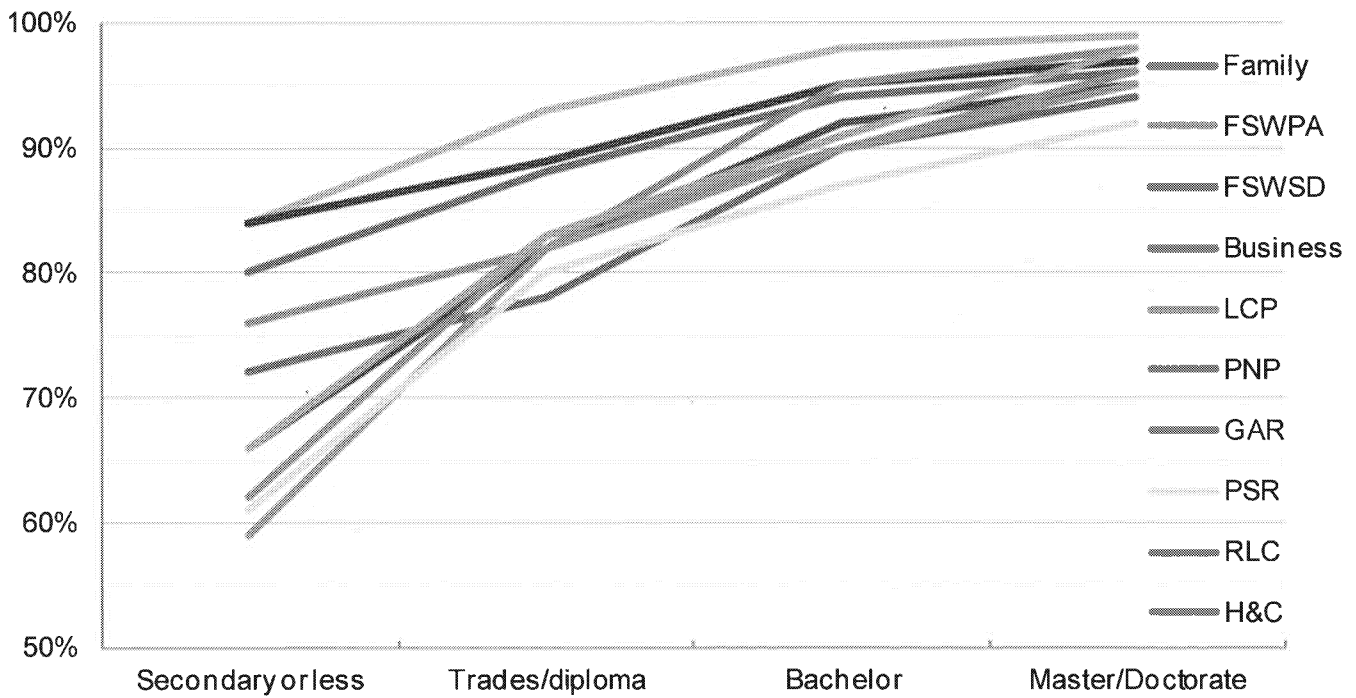
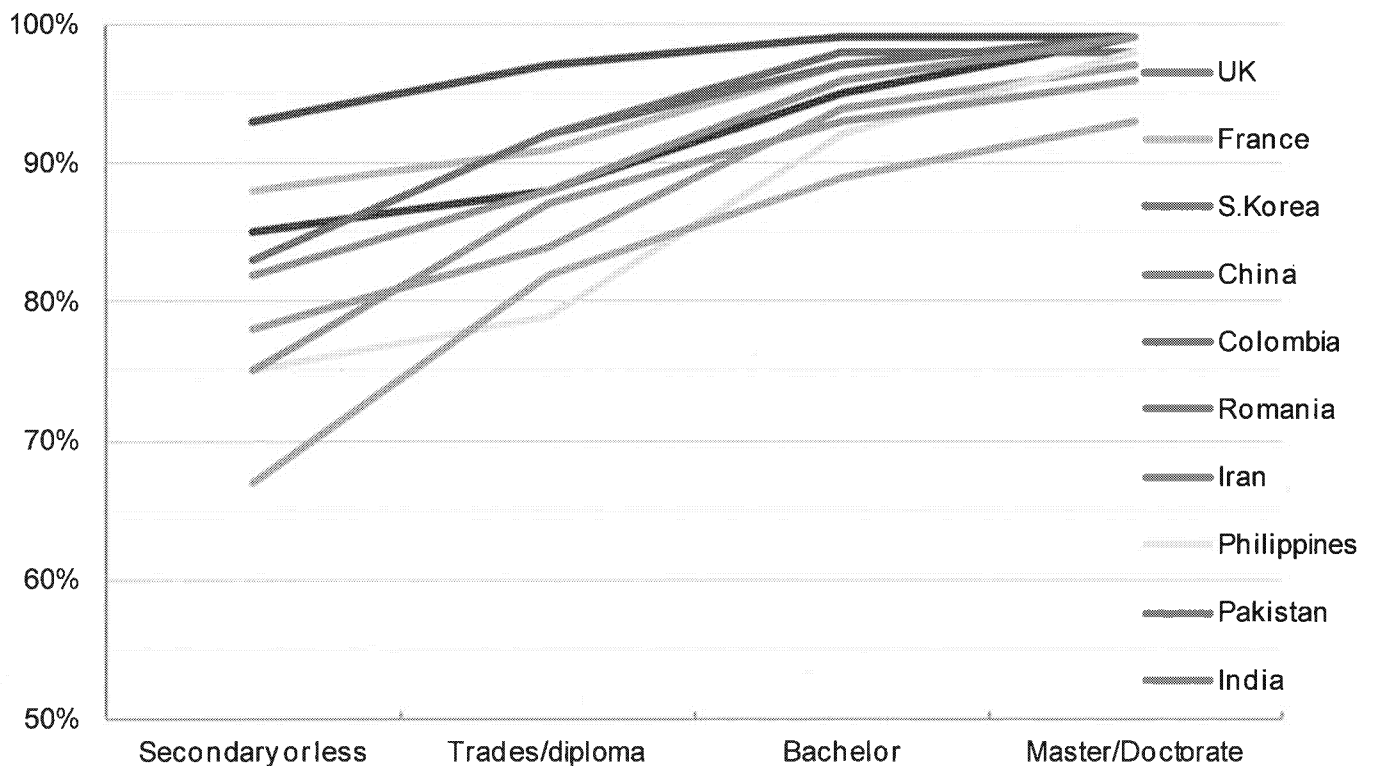


Figure 2: Predicted test pass rates by educational attainment at landing and by country of birth for selected countries



Immigration category

- Figure 1 shows the predicted knowledge test pass rate by applicant educational attainment at time of landing and by immigration category.
- Applicants in the economic immigration categories obtain the highest citizenship test pass rates. For example, the rate for Federal Skilled Worker category is about 10 percentage points higher than the rate for the Family class.
- Applicants from the refugee immigration categories obtain the lowest test pass rates, especially the Government Assisted Refugees (GAR) and Privately Sponsored Refugees categories (PSR). The rates for GAR and PSR are about 4 percentage points lower than for the Family class.
- The difference in the predicted test pass rates between various immigration categories decreases as the educational attainment of applicants at time of landing increases. The total difference in the test pass rates across immigration categories is about 25 percentage points for those with secondary or less education, but is 7 percentage points for those with Master/Doctorate degrees (Figure 1).

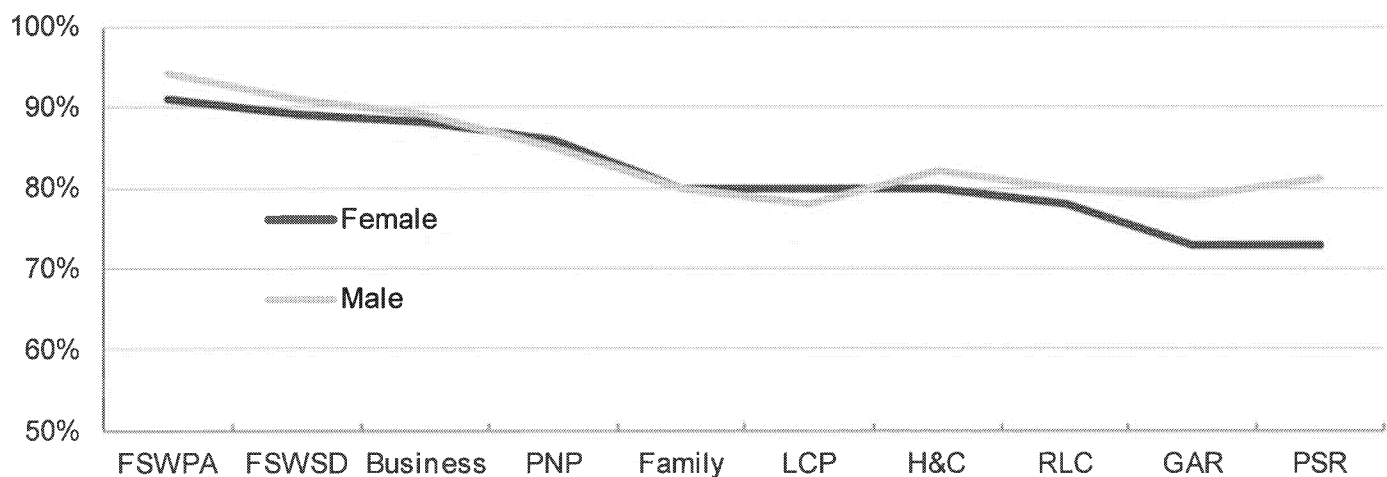
Country of birth

- Among the countries of birth with more than 1,500 immigrants who wrote the test, applicants from the US and the UK have the highest predicted test pass rates; applicants from the Philippines, Morocco, Lebanon, Bangladesh, Sri Lanka, India, Jamaica, Algeria, Iraq, Vietnam and Afghanistan have the lowest rates—14 to 22 percentage points lower than the rates for the US and the UK.
- Applicants from countries of birth with the lowest predicted test pass rates, tend to have the lowest rates in all education categories. However, the gap between applicants from countries with a high test pass rate and applicants from countries with a low test pass rate diminishes as applicants' educational attainment at time of landing increases (Figure 2).

Gender difference

- Overall, gender difference in predicted test pass rate is modest. Women are slightly disadvantaged in passing the citizenship test (1.5 percentage points lower).
- Across immigration categories, the gender difference is larger among GAR and PSR applicants than among applicants in other immigration categories. For GAR and PSR, the predicted test pass rates for females are respectively 6.3 and 9.5 percentage points lower than that of their male counterparts. On the other hand, there is little difference in the test pass rates between men and women in the Family, Business, PNP and LCP categories (Figure 3).

Figure 3: Predicted test pass rates by gender and by immigration category



- Analysis by gender and by marital status at time of citizenship application shows that gender difference for married applicants is twice that for divorced/separated applicants. The pass rate for married women is 2 percentage points lower than for married men, while the rate for divorced/separated women is 1 percentage point lower than for divorced/separated men. Very little difference is observed for single applicants (Figure 4).

Age at test

- In general, the test pass rate is negatively associated with the applicants' age at test (Figure 5).
- The gaps between age groups, however, vary considerably according to the level of educational attainment at time of landing. The largest gaps between age groups are observed for applicants with secondary school education or less. The gap among age groups converges as the educational level increases.

Official language ability at time of landing

- In general, applicants who reported to be able to communicate in both official languages or in English at time of landing have the highest predicted test pass rates, about 10 percentage points higher than applicants who were not able to communicate in either of the official languages. The rate for applicants who were able to communicate in French was about 5 percentage points higher than those who were not able to communicate in either of the official languages, but about 5 percentage points lower than those who were able to communicate in English.
- Although differences across language groups are observed for all four levels of educational attainment, official language ability appears to matter the most among applicants with secondary school education or less (Figure 6).

Figure 4: Predicted test pass rates by gender and by marital status at citizenship application

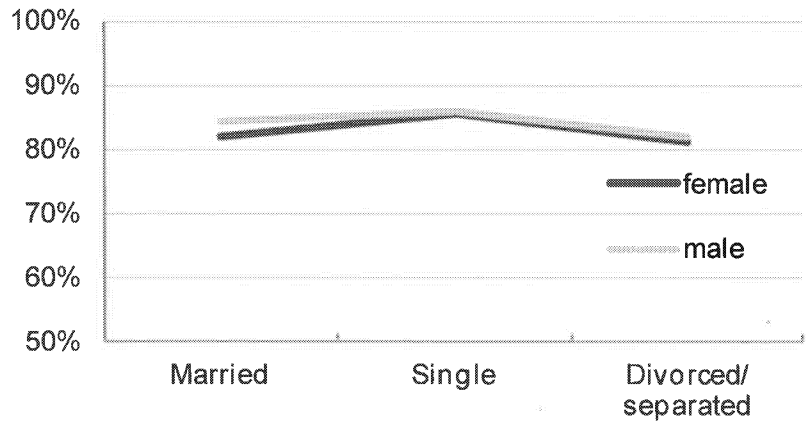


Figure 5: Predicted test pass rates by age at test and by educational attainment at landing

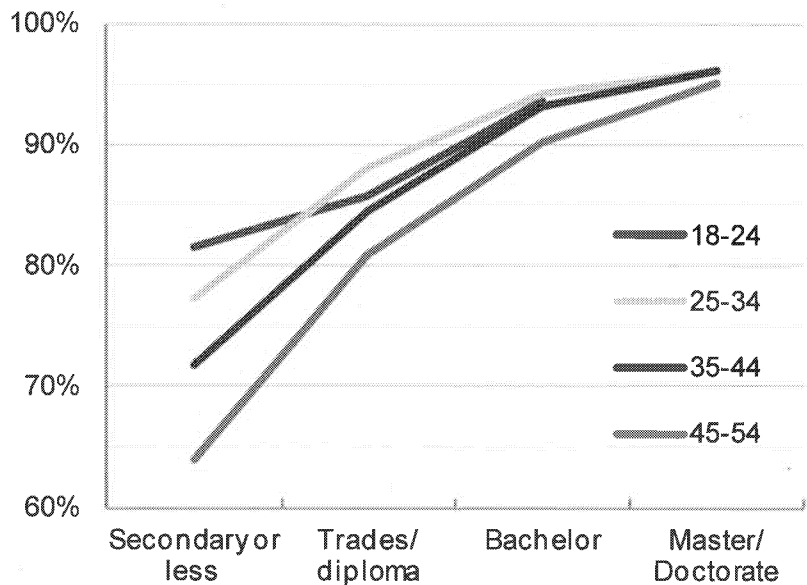


Figure 6: Predicted test pass rates by educational attainment at landing and by official language ability at landing

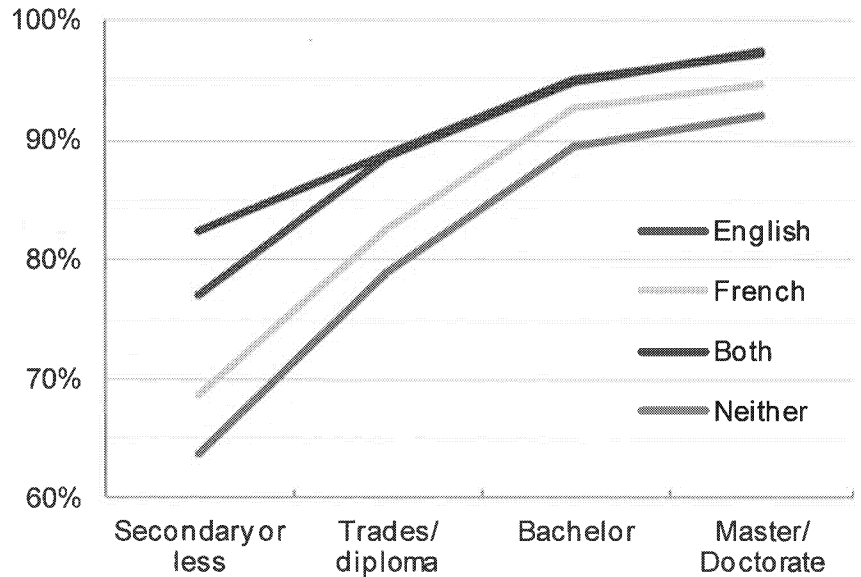
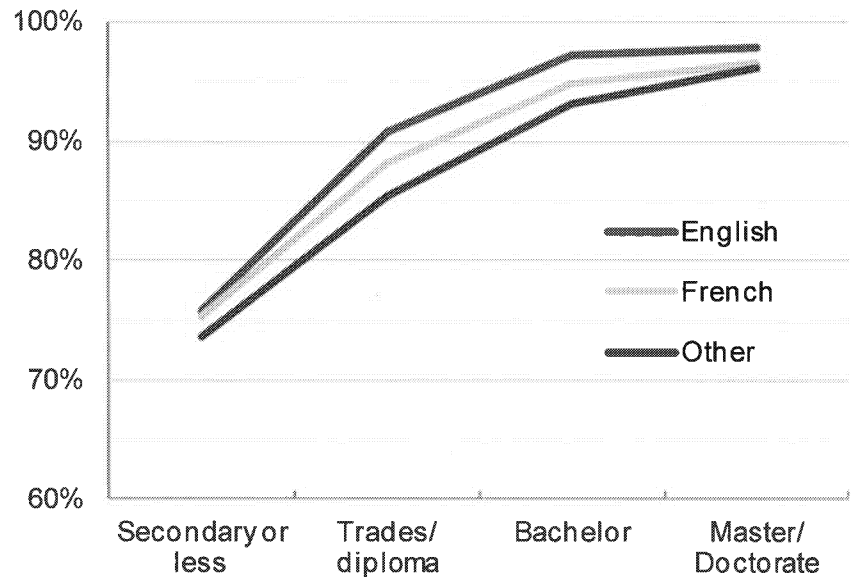


Figure 7: Predicted test pass rates by educational attainment at landing and by mother tongue



Mother tongue

Applicants whose mother tongue is English have the highest pass rates and those whose mother tongue is neither English nor French have the lowest pass rates (Figure 7). However, the difference is modest after controlling for the effect of other variables in the model. The gaps between these language profiles are seen more in the middle levels of educational attainment than in the lowest (Secondary or less) or in the highest level (Master/Doctorate).

Age at time of landing and marital status at time of application

The regression results show that, after controlling for the effect of other variables in the model, there are modest differences in the test pass rates with respect to applicants' age at landing and marital status at time of application. The effect of these variables is less prominent than educational attainment, immigration category or country of birth.

A note of caution: Although much emphasis is placed on the effect of educational attainment on the test pass rates, it by no means implies that the effects of the other variables can be overlooked. After controlling for the effect of educational attainment along with other variables in the model, the effects of a few variables are still sizable. For example, the differences across immigration categories and countries of birth are large for those with low educational attainment and much smaller, but still evident for those with high educational attainment.

Appendix: Sample Statistics

| Variable | Variable category | % | Frequency | Unadjusted test pass rate |
|--|--|-------|-----------|---------------------------|
| Test result | Fail | 16.51 | 24195 | |
| | Pass | 83.49 | 122355 | 83.5 |
| Gender | Female | 54.20 | 79423 | 81.7 |
| | Male | 45.80 | 67127 | 85.6 |
| Educational attainment at time of landing | Secondary or less | 38.09 | 55828 | 69.1 |
| | Trades/diploma* | 19.77 | 28976 | 85.3 |
| | Bachelor** | 29.87 | 43771 | 94.7 |
| | Master/Doctorate | 12.27 | 17975 | 97.8 |
| Marital status at time of citizenship application | Married/common law*** | 70.28 | 103002 | 83.4 |
| | Single | 23.75 | 34810 | 86.0 |
| | Divorced/separated | 5.96 | 8738 | 74.2 |
| Age at time of test | 18-24 | 11.21 | 16423 | 83.4 |
| | 25-34 | 35.19 | 51574 | 82.6 |
| | 35-44 | 36.33 | 53237 | 85.4 |
| | 45-54 | 17.27 | 25316 | 81.3 |
| Age at time of landing | 0-9 | 1.01 | 1479 | 87.8 |
| | 10-14 | 3.58 | 5247 | 84.1 |
| | 15-19 | 10.18 | 14920 | 79.4 |
| | 20-24 | 15.28 | 22386 | 77.9 |
| | 25-29 | 21.64 | 31718 | 85.3 |
| | 30-34 | 20.11 | 29478 | 86.6 |
| | 35-39 | 14.53 | 21298 | 85.7 |
| | 40-44 | 9.12 | 13363 | 83.2 |
| Immigration category | 45+ | 4.55 | 6661 | 81.1 |
| | Family | 29.34 | 42993 | 74.8 |
| | Federal skilled worker principle applicants (FSWPA) | 22.99 | 33693 | 97.1 |
| | Federal skilled worker spouse and dependents (FSWSD) | 19.93 | 29209 | 91.3 |
| | Business | 3.58 | 5243 | 88.5 |
| | Live in care givers (LCP) | 3.39 | 4963 | 82.0 |
| | Provincial nominee program (PNP) | 3.78 | 5538 | 89.2 |
| | Government assistant refugees (GAR) | 3.02 | 4429 | 54.1 |
| | Private sponsored refugees (PSR) | 1.92 | 2808 | 57.4 |
| | Refugees Landed in Canada (RLC) | 8.27 | 12118 | 73.0 |
| Self reported official language ability at time of landing | Humanitarian and Compassionate and other (H&C & other) | 3.79 | 5556 | 77.3 |
| | English | 59.39 | 87040 | 87.7 |
| | French | 5.51 | 8079 | 79.3 |
| | Both | 11.55 | 16933 | 94.8 |
| | Neither | 23.54 | 34498 | 68.3 |
| Mother tongue | Other | 87.91 | 128828 | 82.6 |
| | English | 9.03 | 13236 | 88.9 |
| | French | 3.06 | 4486 | 92.2 |

| Variable | Variable category | % | Frequency | Unadjusted test pass rate |
|-------------------------|---------------------|-------|-----------|---------------------------|
| Place of birth**** | UK | 2.01 | 2945 | 97.9 |
| | Former USSR | 4.66 | 6826 | 89.1 |
| | Former Yugoslavia | 0.80 | 1174 | 78.4 |
| | India | 12.90 | 18908 | 81.0 |
| | P.R. China | 9.48 | 13892 | 89.0 |
| | Philippines | 8.46 | 12398 | 85.7 |
| | Pakistan | 5.42 | 7947 | 85.7 |
| | Iran | 3.07 | 4504 | 88.0 |
| | Sri Lanka | 2.32 | 3404 | 60.9 |
| | Colombia | 2.19 | 3204 | 83.4 |
| | S. Korea | 2.18 | 3189 | 93.1 |
| | Romania | 2.10 | 3075 | 94.2 |
| | Algeria | 1.86 | 2723 | 85.9 |
| | Morocco | 1.76 | 2581 | 86.2 |
| | Bangladesh | 1.66 | 2431 | 84.9 |
| | Vietnam | 1.60 | 2344 | 52.6 |
| | Lebanon | 1.52 | 2229 | 83.0 |
| | France | 1.43 | 2097 | 97.1 |
| | Mexico | 1.43 | 2089 | 86.4 |
| | Afghanistan | 1.40 | 2048 | 46.1 |
| | Jamaica | 1.24 | 1814 | 74.6 |
| | US | 1.24 | 1814 | 98.1 |
| | Nigeria | 1.23 | 1808 | 92.8 |
| | Iraq | 1.12 | 1640 | 65.1 |
| | W.N. Europe | 1.14 | 1672 | 97.0 |
| | E. Europe | 1.69 | 2482 | 89.6 |
| | S. Europe | 0.94 | 1371 | 77.0 |
| | Caribbean & Bermuda | 2.65 | 3882 | 75.5 |
| | C/S. America | 4.52 | 6626 | 83.1 |
| | W. Africa | 1.66 | 2431 | 78.9 |
| | E. Africa | 3.50 | 5135 | 75.1 |
| | N. Africa | 2.01 | 2947 | 81.7 |
| | C. Africa | 1.18 | 1734 | 79.4 |
| | S. Africa | 0.60 | 882 | 98.5 |
| W/C. Asia & Middle East | 3.00 | 4397 | 84.2 | |
| E. Asia | 1.80 | 2639 | 92.5 | |
| SE/S. Asia | 1.68 | 2456 | 71.1 | |
| Oceania | 0.55 | 812 | 90.9 | |

*. Including formal trade certificate, diploma or apprenticeship, other non-university certificate or diploma and some university, no degree.

**.. Bachelor's degree or first professional degree and some post graduate, no further degree.

***. Including widowed, divorced, legally separated and annulled marriage.

****. Categories of country of birth are mutually exclusive; the 24 individual countries of birth are those that rank highest according to the number of applicants. Other countries are grouped according to Statistics Canada' Standard Classification of Countries and Areas of Interest (SCCAI) 2010. The top 24 countries of birth are excluded from the world regions listed below.

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