### **Insights on Canadian Society**

### Results from the 2016 Census: English–French bilingualism among Canadian children and youth



by Martin Turcotte

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by Martin Turcotte

This issue of *Insights on Canadian Society* presents a study on English-French bilingualism based on data from the 2006 and 2016 censuses of population. The article also uses integrated census data from 2006 and 2016. This new dataset provides information about the changing characteristics of respondents who provided information during the 2006 and 2016 censuses.



### Overview of the study

This study uses data from the 2006 and 2016 censuses of population, as well as integrated census data from 2006 and 2016, to examine the characteristics associated with English–French bilingualism among Canadian children and youth who were aged 5 to 17 in 2006. The study also examines the factors associated with the acquisition and retention of English–French bilingualism among children and youth in Quebec and in Canada outside Quebec.

- In 2016, in Canada outside Quebec, the English–French bilingualism rate among youth aged 5 to 17 was 15%, up from less than 13% in 2006. Among their Quebec counterparts, the rate was 33% in 2016, compared with 28% in 2006.
- The English-French bilingualism rate in 2016 was higher among children and youth who, in 2006, were in an official language minority group, had bilingual parents, had parents with a higher level of education, were in a higher income family, and were living in a community with a higher concentration of the official language minority population.
- The retention rate corresponds to the proportion of English-French bilingual people in 2006 who were still bilingual in 2016. Among children and youth aged 5 to 17 who were living in Quebec and who were bilingual in 2006, 94% were still bilingual in 2016, when they were aged 15 to 27. In Canada outside Quebec, the corresponding proportion was 65%.
- In Quebec, the retention rate was over 90% in almost all demographic groups. In Canada outside Quebec, the retention rates were significantly lower among those whose mother tongue was English, among those who had another mother tongue (neither English nor French), and among those who were aged 14 to 17 in 2006.
- Among children and youth who were not bilingual in English and French in 2006, 55% of those who were living in Quebec had become bilingual by 2016. In Canada outside Quebec, this proportion was 7%.

### Introduction

In Canada, institutional bilingualism governs and defines communications between the federal government and the general population. As stipulated in the Official Languages Act, the federal government is required to communicate with the public in Canada's two official languages: English and French. Canadians' language rights, which are entrenched in the Canadian Charter of Rights and Freedoms, provide individuals with "the right to communicate with, and to receive available services from, any head or central office of an institution of the Parliament or government of Canada in English or French" (section 20(1)). Furthermore, all citizens have the right to use English or French in any parliamentary debates and business and within the federal public service.

While institutional bilingualism is legally well established, English-French bilingualism is not a prerequisite for individual Canadian citizens, since they can-in theory—receive services in the official language of their choice.1 However, according to various studies that evaluated the pros and cons of individual bilingualism, being bilingual is an asset, be it for children, youth or adults. Associations have been made between bilingualism and other cognitive results, such as being more attentive,<sup>2</sup> getting better grades and achieving a higher level of education.3 In Canada, English-French bilingualism is associated with better employment opportunities and better salaries.4

Despite the conclusions drawn from these studies, several methodological debates persist in the literature, particularly concerning the techniques and data used. 5 Specifically, according to some

people who claim that bilingualism in itself is not the reason behind these better outcomes, individuals who are or become bilingual are more likely to have other characteristics that are not measured by surveys, such as better cognitive abilities prior to becoming bilingual or higher socioeconomic status. Therefore, it is these bilingualism-related traits—rather than bilingualism itself—that lead to better outcomes.<sup>6</sup>

Few people dispute the notion that being proficient in two or more languages gives an individual an advantage. Although the federal government and its institutions recognize that individual English-French bilingualism is not mandatory, they encourage and promote it in various ways.7 For example, the Official Languages Act requires that the Minister of Canadian Heritage take measures to "encourage and support the learning of English and French in Canada." Furthermore, according to the Office of the Commissioner of Official Languages, "Knowledge of both of Canada's official languages encourages individual mobility and may thus help foster stronger economies through better communication and more harmonious intergroup relations."8

The Action Plan for Official Languages 2018–2023, which outlines the details and costs of significant government investments in the enhancement of official languages in Canada from 2018 to 2023, sets out specific objectives for increasing individual English–French bilingualism over the next 20 years. Specifically, this plan aims to increase the English–French bilingualism rate from 17.9% in 2016 to 20% by 2036.9 To achieve this objective, a greater number

of Canadians need to successfully learn and become proficient in their second official language.

Furthermore, individuals who become bilingual must maintain their ability to communicate in both official languages over time. The challenges in this regard appear to be significant, particularly among youth and young adults living outside Quebec whose mother tongue is English. For these youth, the capacity to hold a conversation in French is often associated with having taken a French immersion program or mandatory second language training in elementary or high school.

However, many Anglophone children and teenagers who were bilingual in English and French lose their ability to hold a conversation in French after they complete their education. This lower bilingualism retention level has a significant impact on the overall development of English–French bilingualism in Canada outside Quebec.

Statistics Canada's language projection models can be used to gauge the impact of lower retention rates.11 Assuming that the English-French bilingualism retention level remains similar to what has been observed in recent years, the English-French bilingualism rate among Canadians outside Quebec with English as a mother tongue would remain fairly unchanged from 2016 to 2036, at around 7%. However, if all English-speaking children and youth who speak both official languages were to remain bilingual after the age of 17, then the English-French bilingualism rate for this population could almost double, from 7% in 2016 to 12% in 2036.

Demographic projections and existing studies do not provide information about the retention and acquisition of English-French bilingualism in Canada. The goal of this study is to fill that gap using data from the 2006 and 2016 censuses of population and integrated census data from 2006 and 2016—a new dataset that makes it possible to compare the responses a sample of respondents provided as part of the 2016 Census with those they provided as part of the 2006 Census. This dataset can be used to directly estimate the proportion of children and youth who have lost proficiency in their second official language as they have grown older, as well as the proportion who have acquired the second official language. 12 These data reveal various individual and contextual characteristics associated with the retention of English–French bilingualism over time (e.g., region of origin, parents' level of education, parental bilingualism and family characteristics).

In particular, this study provides answers to the following questions: (I) What are the characteristics associated with English–French bilingualism in 2016 among children and youth who were aged 5 to 17 in 2006? (2) What are the factors associated with the acquisition and retention of English–French bilingualism among children and youth? Given the regional variations in English–French bilingualism, analyses were conducted separately for two regions—Quebec and Canada outside Quebec.

# English-French bilingualism has been on the rise in Canada since 1961, especially in Quebec

Generally speaking, there has been an increase in English–French bilingualism in Canada over the past decades. The proportion of Canadians who are proficient enough in their second official language (English or French) to hold a conversation has risen from 12.2% in 1961 to 17.9% in 2016.

This increase has not occurred at the same pace across the country. While bilingualism nearly doubled in Quebec from 25.5% in 1961 to 44.5% in 2016, the proportion of bilingual individuals increased by nearly 3 percentage points in the rest of Canada—up from 6.9% in 1961 to 9.8% in 2016.<sup>13</sup>

English–French bilingualism has continued to grow in Canada over the past 10 years, primarily in Quebec. Nearly three-quarters (74%) of this increase in the number of bilingual people from 2006 to 2016 is attributable to the increase observed in Quebec.

Given this trend, it is not surprising that the English–French bilingualism rate varied from province to province. In 2016, Quebec had the highest English–French bilingualism rate (44.5%), followed by New Brunswick (33.9%). The English–French bilingualism rate in the most populated Canadian provinces was lower than the overall national rate: 11.2% in Ontario, 6.8% in British Columbia and 6.6% in Alberta.

The language projections show a widening gap in the long term between the English-French bilingualism rate in Quebec, which is on the rise, and the English-

French bilingualism rates in other provinces, which are either stagnant or in decline.<sup>14</sup>

# In both Quebec and Canada outside Quebec, the English—French bilingualism rate is highest among children and youth

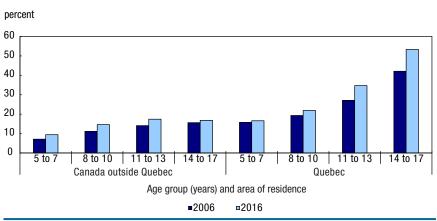
In addition to the differences between provinces, there are notable differences between the English-French bilingualism rates of individuals whose mother tongue is French and those whose mother tongue is English or a language other than English or French. In Canada outside Quebec, among those who listed only French as a mother tongue, 85% were bilingual in English and French, compared with 7% of those who listed English as a mother tongue and 5% of those whose mother tongue was neither English nor French.

In Quebec, people with English as a mother tongue had a higher English–French bilingualism rate (69%) than those whose mother tongue was neither English nor French (51%) and those whose mother tongue was French (40%).

These results are explained in part by the fact that people in minority language groups (Anglophones in Quebec and Francophones in the rest of Canada) are more likely to communicate with people in the majority language group.

Differences were also noted between age groups, with the youngest group being more likely to be proficient in both official languages. In Canada outside Quebec, 10- to 19-year-olds had the highest bilingualism rate in 2016 (16%). These are the ages when youth attend elementary or high school. In Quebec, the highest

Chart 1
English–French bilingualism rate of children and youth aged 5 to 17, by detailed age group, Canada outside Quebec and Quebec, 2006 and 2016



Source: Statistics Canada, Census of Population, 2006 and 2016.

English–French bilingualism rate in 2016 was observed among 20- to 29-year-olds (65%)—the ages when many young adults enter the labour market or pursue postsecondary education.

# English—French bilingualism is on the rise among children and youth both in Quebec and in the rest of Canada

Children and youth are the people most likely to spur growth in the overall English–French bilingualism rate in Canada in the long term. As people grow older, they are less likely to learn a second language. Children and youth often have more learning opportunities and sometimes have a greater ability to acquire language skills than older individuals.

Some signs suggest that there has been an increase in English–French bilingualism rates among recent child and youth cohorts in Canada. This has been observed in Quebec in particular, but also in the rest of Canada. In Canada outside Quebec,

the English–French bilingualism rate for 5- to 17-year-olds rose from 12.5% in 2006 to 14.7% in 2016. This increase in bilingualism among children and youth was recorded for all age groups (Chart I), although it occurred at the same time as a decline in overall bilingualism in Canada outside Quebec (from 10.2% in 2006 to 9.8% in 2016).

Although the census contains no information on the types of educational institutions children attend, an increase in enrolment in French immersion programs may have played a role in these trends. From 2006 to 2016, the number of children and youth enrolled in French immersion programs in elementary and high schools in Canada outside Quebec rose 48%, from 304,293 to 449,745. In comparison, the total number of enrolments in elementary and high schools remained virtually unchanged over the same period (-1%). The proportion of all children and youth enrolled in a French immersion program at an elementary or high school in Canada

outside Quebec increased from 7.7% in 2006/2007 to 11.5% in 2016/2017.<sup>15</sup>

With regard to their counterparts in the same age groups living in Quebec, there was a more pronounced increase in English-French bilingualism among recent cohorts than in the rest of Canada from 28% in 2006 to 33% in 2016 for 5- to 17-year-olds. 16 More specifically, the English-French bilingualism rate for youth aged 14 to 17 living in Quebec rose from 42% in 2006 to 53% in 2016. Since 2006/2007, children living in Quebec have taken an English as a second language program once they start elementary school, which could have had an impact on the English-French bilingualism rate of the most recent cohorts. It is also possible that new generations of children and youth living in Quebec are exposed to English more often or that they are simply more interested and driven than their predecessors to learn English and use it in their daily lives. 17

In the sections that follow, the longitudinal properties of the integrated Census data from 2006 and 2016 are used to examine issues related to the retention and acquisition of English-French bilingualism among children and youth, both in Quebec and in Canada outside Quebec.

### Changes in bilingualism rates among children and youth have varied across provinces and territories

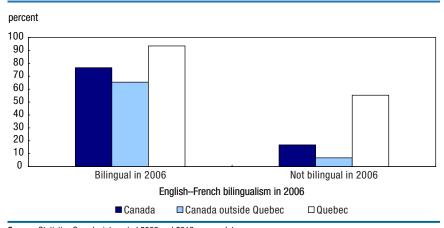
For the remainder of this paper, the focus will be on a single cohort—children and youth who were aged 5 to 17 in 2006 and who were examined again in 2016, when they were aged 15 to 27. Among those who were in this cohort, the number

Chart 2
English–French bilingualism rate in 2006 and 2016 of a cohort of children and youth aged 5 to 17 in 2006, by province or territory of residence in 2006

Province or territory of residence in 2006 Nunavut = Saskatchewan Alberta British Columbia Manitoba Newfoundland and Labrador Ontario Northwest Territories Nova Scotia Yukon Prince Edward Island New Brunswick Quebec 10 20 30 40 50 60 70 0 percent **2006 2016** 

Source: Statistics Canada, integrated 2006 and 2016 census data.

Chart 3
English–French bilingualism rate in 2016 of a cohort of children and youth aged 5 to 17 in 2006, by bilingualism status in 2006, Canada, Canada outside Quebec and Quebec



Source: Statistics Canada, integrated 2006 and 2016 census data

and proportion of individuals who were bilingual in English and French increased during the period.

Specifically, in 2006, 17% of children and youth aged 5 to 17 had sufficient knowledge of both official languages to hold a conversation. Ten years later, when they were aged 15 to 27, their English–French bilingualism

rate had risen to 27%. However, this change was not the same in all provinces and territories.

Quebec recorded the largest increase in the proportion of children and youth with proficiency in both official languages. Among children and youth aged 5 to 17 in 2006 and

living in Quebec that year, 28% were bilingual. Ten years later, 66% of them were bilingual (Chart 2).

The increase in the English–French bilingualism rate was also significant for the cohort of children and youth aged 5 to 17 who were living in New Brunswick in 2006. In 2016, 50% of them were bilingual, compared with 37% a decade earlier. However, the increase in bilingualism was smaller in Ontario and Manitoba, and the rates changed little among children and youth living in the other Prairie provinces. Among young Albertans who were aged 5 to 17 in 2006, for example, the English-French bilingualism remained unchanged at about 9%.

### Quebec has higher retention and acquisition bilingualism rates than the rest of Canada

If English-French bilingualism progressed faster in Quebec, it is because children and youth living there had higher retention and acquisition rates than those living in Canada outside Quebec. In this study, retention refers to the proportion of bilingual children and youth in 2006 who were still bilingual in 2016, while acquisition refers to the proportion of non-bilingual children and youth in 2006 who had become bilingual in 2016.

With regard to retention, 94% of Quebec children and youth who were bilingual in English and French in 2006 were still bilingual 10 years later (Chart 3), while the same figure was 65% for their counterparts who lived in Canada outside Quebec. In Quebec, the fact that bilingual children and youth had more opportunities to use their second official language outside their home or school may explain their high retention rate of English—French bilingualism into adulthood.

With regard to acquisition, the rates were also lower outside Quebec than they were in Quebec. In Canada outside Quebec, 7% of unilingual children and youth (who spoke only English or French) in 2006 were able to hold a conversation in both official languages 10 years later. In Quebec, there was a higher rate of second official language acquisition—more than half (55%) of the children and youth aged 5 to 17 who were not bilingual in 2006 had become bilingual in English and French by 2016 when they were aged 15 to 27.

# Children and youth in the minority language group were more likely than those in the majority language group to be bilingual in English and French

The previous section showed that children and youth who were already bilingual in 2006 had a higher probability to be bilingual in 2016. That said, other factors are also associated with English–French bilingualism among children and youth, and these factors were not necessarily the same in Quebec and the rest of Canada.

Anglophones and Francophones who were in the minority mother tongue group—both in Quebec and in the rest of Canada—were more likely to be bilingual in English and French in 2016 than those who were in the majority mother tongue group. The gap between the two groups, however, was much more pronounced in Canada outside Quebec, where people with French as a mother tongue were significantly more likely to be bilingual in English and French than those with English as a mother tongue. This was true for both children and adults.

Of the children and youth aged 5 to 17 in 2006 with French as a mother tongue in Canada outside Quebec, 93% were bilingual in English and French in 2016 (Table I). In comparison, this was the case for 12% of their counterparts with English as a mother tongue, and 13% for those who had a mother tongue other than English or French. 18

When all factors were taken into account in a multivariate analysis, the predicted probability of being bilingual in English and French for children and youth living in Canada outside Quebec was 0.59 among those who had French as a mother tongue, compared with 0.13 among those who had English as a mothertongue.

In Quebec, 87% of children and youth with English as a mother tongue were bilingual in English and French in 2016, compared with 61% of their counterparts with French as a mother tongue and 86% of those with a mother tongue other than English or French. However, when other factors were taken into account in the multivariate model, the predicted probability of being bilingual in English and French in 2016 was higher for children and youth with French as a mother tongue (0.66) than it was for those with English as a mother tongue (0.61).

This finding—the opposite of what was found in descriptive statistics—is attributable to the fact that children and youth with English as a mother tongue were also more likely to be already bilingual in 2006 and to have bilingual parents, two factors that are closely linked with English—French bilingualism in 2016. When these characteristics were taken into account, children and

youth with French as a mother tongue were slightly more likely to be bilingual in English and French than those with English as a mother tongue. In Quebec, the probability to be bilingual in English and French was even higher among children and youth with a mother tongue other than English or French, after accounting for other characteristics.

### In Canada outside Quebec, those in younger age groups in 2006 were the most likely to be bilingual in English and French in 2016

In Canada outside Quebec, youth aged 11 to 17 in 2006 were less likely to be bilingual in English and French in 2016 than those who were aged 5 to 10 (Chart 4). These trends highlight the crucial role that school plays in English-French bilingualism for most children and youth in Canada outside Quebec. The children aged 5 to 7 in 2006 were attending elementary and high school throughout the 10-year study period, while youth aged 14 to 17 in 2006 were not. For this latter group, the end of high school is often associated with reduced contact—or even no contact—with the French language.

In Quebec, by contrast, the probability of being bilingual tended to increase with age among children and youth. In particular, 58% of children who were aged 5 to 7 in 2006 were bilingual in English and French 10 years later, compared with 66% of children aged 8 to 10 in 2006, 67% of youth aged 11 to 13, and 70% of youth aged 14 to 17. In Quebec, pursuing a postsecondary education or entering the labour market in Quebec may be associated with greater exposure to the English language.

Table 1
English–French bilingualism rate in 2016 of a cohort of children and youth aged 5 to 17 in 2006, by sociodemographic characteristics, Canada, Canada outside Quebec and Quebec

	Eng	glish–Fren	ch bilinguali	sm rate in 2	016	
	Canada	Canada outside Quebec	Quebec	Canada outside Quebec	Quebec	
Characteristics		percent		predic		
Total	26.9	14.6	66.1		,	
English–French bilingualism in 2006	20.0	14.0	00.1			
No (ref.)	16.8	6.8	55.3	0.09	0.60	
Yes	76.6	65.4	93.5	0.53*	0.88*	
Mother tongue	70.0	00.1	00.0	0.00	0.00	
English (ref.)	14.5	12.0	86.9	0.13	0.61	
French	64.6	92.9	61.4	0.59*	0.66*	
English and French	84.7	77.3	94.1	0.24*	0.70	
Other language	25.2	12.6	86.0	0.15*	0.72*	
Parents bilingual in English and French in 2006			00.0	0.10	0=	
Neither parent (ref.)	14.3	9.2	48.4	0.13	0.60	
One parent	53.3	37.8	70.8	0.19*	0.69*	
Both parents	83.5	75.1	87.0	0.24*	0.77*	
Age group in 2006						
5 to 7 years (ref.)	27.6	18.7	58.4	0.22	0.61	
8 to 10 years	27.3	15.7	66.5	0.16*	0.68*	
11 to 13 years	26.6	13.2	67.4	0.12*	0.68*	
14 to 17 years	26.2	11.7	69.9	0.10*	0.67*	
Sex				• • • • • • • • • • • • • • • • • • • •		
Female (ref.)	29.2	17.5	66.8	0.17	0.66	
Male	24.6	11.8	65.5	0.13*	0.66	
Generational status						
First generation (immigrants) (ref.)	26.0	13.6	84.6	0.15	0.75	
Second generation (children of immigrants)	24.4	14.3	85.7	0.15	0.75	
Third generation (non-immigrants)	27.8	14.9	61.5	0.14	0.65*	
Highest level of education of parents in 2006						
No high school diploma (ref.)	16.2	5.9	45.4	0.09	0.56	
High school diploma	19.1	9.1	59.7	0.12*	0.63*	
Postsecondary diploma	25.1	12.6	60.5	0.13*	0.64*	
Bachelor's degree	33.6	20.0	81.3	0.17*	0.75*	
Graduate degree	40.3	26.4	89.1	0.19*	0.78*	
Economic family income quintile in 2006						
Bottom quintile (ref.)	21.5	10.8	57.4	0.14	0.61	
Second quintile	24.5	11.9	57.8	0.14	0.63*	
Third quintile	26.8	13.6	63.2	0.14*	0.65*	
Fourth quintile	28.5	15.8	70.8	0.15*	0.69*	
Top quintile	31.5	19.3	83.8	0.15*	0.74*	
Presence of the minority language group in the census subdivision in 2006, by quintile						
Bottom quintile (ref.)	17.2	8.0	46.6	0.13	0.61	
Second quintile	21.0	9.8	58.6	0.13	0.64*	
Third quintile	23.6	11.8	62.6	0.14*	0.65*	
Fourth quintile	35.4	11.5	81.1	0.14*	0.73*	
Top quintile	39.0	32.0	84.7	0.19*	0.73*	
Living with parents in 2016						
No (ref.)	27.8	13.1	66.1	0.15	0.68	
140 (101.)						

<sup>...</sup> not applicable

Source: Statistics Canada, integrated 2006 and 2016 census data.

# In Canada outside Quebec, girls were more likely than boys to become bilingual in English and French

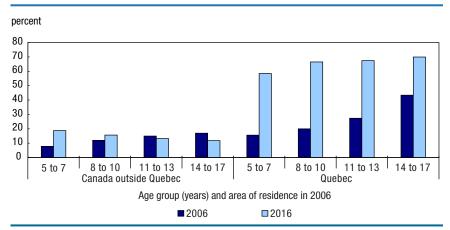
In Quebec, no significant difference was observed between boys and girls with regard to the likelihood of being bilingual in English and French. In Canada outside Quebec, however, girls had higher English-French bilingualism rates. This was confirmed using multivariate analysis. The fact that girls achieve better grades in school than boys, on average, could partially account for these differences between the sexes in Canada outside Quebec. Furthermore, girls are slightly more likely than boys to be enrolled in a French immersion program.<sup>19</sup>

Parental bilingualism was also an important factor, because the influence of parents often plays a key role in the acquisition of a second official language. In Canada outside Quebec, 75% of children and youth aged 5 to 17 who were living with two bilingual parents in 2006 were also bilingual in 2016. The corresponding proportions were 38% for those with just one bilingual parent and 9% for those with no bilingual parents in 2006.

In Canada outside Quebec, however, children and youth with bilingual parents were far more likely to have French as a mother tongue and to be bilingual in English and French in 2006. When other characteristics were accounted for in the multivariate analysis, the association between the bilingualism of parents in 2006 and the bilingualism of their children in 2016 was still significant, but smaller, at least in comparison with descriptive statistics.

 $<sup>^{\</sup>star}$  significantly different from reference category (ref.) (p < 0.05)

Chart 4
English–French bilingualism rate in 2006 and 2016 of a cohort of children and youth aged 5 to 17 in 2006, by detailed age group in 2006, Canada outside Quebec and Quebec



Source: Statistics Canada, integrated 2006 and 2016 census data.

Having bilingual parents in 2006 also had a significant impact on English–French bilingualism in Quebec. Having two bilingual parents (English–French) in 2006 increased the predicted probability of being bilingual in English and French in 2016 by 17 percentage points, once other factors were taken into account.

# In Canada outside Quebec, children and youth with an immigrant background were as likely to be bilingual in English and French as their counterparts from the third generation or more

Since 2001, immigration has been the main source of Canada's population growth, accounting for approximately two-thirds of the growth. According to population projections, Canada's population growth over the next few years should increasingly depend on net international migration.<sup>20</sup> The growing share of the immigrant

population has already had a direct effect on the evolution of English-French bilingualism in Canada, a trend that is expected to continue in the coming years. Previous research has shown that international immigration contributed to a stagnation, and even a decline, in English-French bilingualism in Canada outside Quebec from 2001 to 2011.21 Furthermore, language projections show that higher international immigration is associated with slower growth in English-French bilingualism. This is because the majority of immigrants have a mother tongue other than English or French and arrive in Canada during their adult years, when learning a new language can be more difficult or less frequent.<sup>22</sup>

But what about immigrant children and youth (first generation immigrants who came in the country as children) and children and youth with immigrant parents (second generation immigrants, i.e., those who had at least one parent was born

outside Canada) who participated in the Canadian education system? In Canada outside Quebec, regardless of generational status, the English–French bilingualism rate in 2016 varied between 13% and 14%. Similar results were obtained with a multivariate analysis.

In Quebec, however, first and second generation children and youth were more likely to be bilingual in English and French in 2016 than children and youth from the third generation or more (with both parents born in Canada). This finding was also confirmed by the multivariate analysis.

# Children and youth whose parents had a higher level of education were more likely to be bilingual in English and French than those with lesseducated parents

Family socioeconomic characteristics are linked to the socioeconomic outcomes of children and youth, including academic performance<sup>23</sup> and earnings in their adult life.24 Furthermore, parents with a higher level of education often have greater educational expectations of their children. For example, they display behaviour that generally leads to their children achieving better academic results.<sup>25</sup> Similarly, parents with a higher level of education may also promote and encourage the acquisition of the second official language in or outside school more often than less-educated parents.

In both Quebec and the rest of Canada, children with whose parents had a higher level of education in 2006 were more likely to be bilingual in English and French in 2016 than those with less-educated parents, a result that was confirmed by the multivariate analysis. The effect of

parental education appeared to be particularly significant in Quebec, with a predicted probability of 0.78 for those who had parents with a graduate degree, and 0.56 for those who had parents without a high school diploma.

Family income had little impact on English–French bilingualism outside of Quebec, but played an important role in Quebec. After taking the other characteristics into account, the predicted probability of being bilingual in English and French was 0.74 for children and youth in Quebec whose family income was in the top quintile, compared with 0.61 for their counterparts in the bottom quintile.

# For children and youth, the language characteristics of their area of residence in 2006 were linked to English-French bilingualism in 2016

The characteristics of the community in which children and youth grow up—particularly the language characteristics and behaviours of the population of their municipality (census subdivision)—may have a direct impact on the acquisition of English–French bilingualism. People living in a community with a higher concentration of the official language minority population are more likely to be or to become bilingual in English and French.

In Canada outside Quebec, 32% of the children and youth living in a municipality with a higher concentration of people with French as a mother tongue in 2006 (top quintile) were bilingual in English and French in 2016, compared with between 8% and 12% of those living in a municipality with a lower concentration of people with French

as a mother tongue (first to fourth quintiles). This finding was confirmed through multivariate analysis.

The same trends were observed in Quebec, but only for children and youth with French as a mother tongue. For them, the higher the proportion of people in their municipality of residence with English as a mother tongue, the more likely they were to be bilingual in English and French.

However, for children and youth in Quebec with English as a mother tongue, living in a municipality with a higher proportion of people with English as a mother tongue was associated with a lower English-French bilingualism rate. For example, of the children and youth with English as a mother tongue living in a Quebec municipality with a lower proportion of people with English as a mother tongue (bottom quintile), 97% were bilingual in English and French in 2016. In comparison, the corresponding proportion was 85% for those living in a municipality with a higher concentration of people with English as a mother tongue.

### Acquisition and retention of English-French bilingualism are systematically higher in Quebec than in the rest of Canada

As mentioned earlier, the higher English–French bilingualism rate for children and youth living in Quebec is linked to a greater retention of bilingualism among those who were already bilingual in 2006, and by a higher acquisition of bilingualism among those who were not bilingual in 2006. The acquisition and retention of a second official language, however, varied across sociodemographic characteristics.

The acquisition rates of English-French bilingualism by children and youth were higher in Quebec than in the rest of Canada. Acquisition rates in Quebec were even higher for certain groups, such as children and youth whose parents were both bilingual, those whose parents both had a high education level, and those whose family income was in a higher quintile. For example, the English-French bilingualism acquisition rate in 2016 was 73% for youth in Quebec whose parents had a bachelor's degree, compared with 48% for those whose parents had a high school diploma (Table 2).

In Canada outside Quebec, the acquisition of English-French bilingualism by non-bilingual children and youth was more common among younger children. Of the children aged 5 to 7 in 2006 who were not bilingual that year, 13% had become bilingual 10 years later, compared with less than 3% of youth aged 14 to 17 in 2006 who were not bilingual that year. Younger children were more likely than older youth to have attended school during the entire period from 2006 to 2016. Therefore, they were more likely to have studied French, either as part of a French immersion program or through regular French as a second language courses.

As was the case in Quebec, the English-French bilingualism acquisition rate among non-bilingual children and youth in Canada outside Quebec was higher among those whose parents had a higher level of education and those whose parents were bilingual. Acquisition rates were also higher among children and youth with French as a mother tongue, girls and those living in a community with a high proportion of people with French as a mother tongue in 2006.

Table 2
Acquisition and retention of English–French bilingualism in 2016 among children and youth who were aged 5 to 17 in 2006, by sociodemographic characteristics, Canada outside Quebec and Quebec

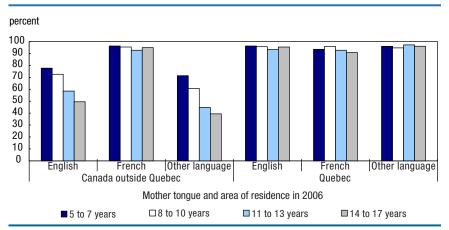
	Acquisition of bilingualism in 2016 among those who were not bilingual in 2006		Retention of bilingualism in 2016 among those who were already bilingual in 2006	
	Canada outside Quebec	Quebec	Canada outside Quebec	Quebec
Characteristics		per	cent	
Mother tongue				
English	5.8	58.3	60.5	94.7
French	80.3	54.1	97.2	92.1
English and French	23.7	70.0	86.2	95.6
Other language	8.5	74.0	46.2	95.6
Parents bilingual in English and French in 2006				
Neither parent	5.5	43.6	50.8	88.4
One parent	16.6	61.4	76.2	91.6
Both parents	42.9	77.4	90.2	96.2
Age group in 2006				
5 to 7 years	13.4	51.8	81.9	94.6
8 to 10 years	7.5	59.3	75.4	95.6
11 to 13 years	4.4	57.5	63.3	93.6
14 to 17 years	2.7	52.7	55.7	92.5
Sex				
Female	8.7	55.9	66.6	93.3
Male	5.1	54.8	63.9	93.6
Generational status				
First generation (immigrants)	8.9	76.2	48.0	96.1
Second generation (children of immigrants)	7.7	73.5	57.9	95.4
Third generation (non-immigrants)	6.2	52.4	70.4	92.3
Highest level of education of at least one parent in 2006				
No high school diploma	2.9	34.1	48.5	90.1
High school diploma	4.3	47.5	55.3	90.5
Postsecondary diploma	5.4	50.4	64.2	91.5
Bachelor's degree	10.3	72.7	69.5	97.5
Graduate degree	13.9	83.7	72.5	96.6
Economic family income quintile in 2006				
Bottom quintile	6.1	45.6	55.8	91.8
Second quintile	6.0	46.6	59.4	92.2
Third quintile	6.3	52.6	65.4	91.5
Fourth quintile	7.1	61.7	67.5	93.8
Top quintile	8.3	75.8	70.6	97.2
Presence of the minority language group in the census subdivision in 2006, by quintile				
Bottom quintile	4.9	42.2	47.8	84.7
Second quintile	5.3	52.6	50.5	89.6
Third quintile	6.4	54.8	57.5	91.9
Fourth quintile	5.7	70.1	60.6	95.6
Top quintile	13.3	67.8	80.6	95.5
Living with parents in 2016				
No	3.6	53.7	60.6	91.1
Yes	7.9	56.0	67.6	94.9

With regard to the retention of English–French bilingualism, in Quebec, the vast majority of children and youth who were bilingual in 2006 were still bilingual in 2016, regardless of individual or family characteristics. For example, the retention rates for Quebec children and youth who were bilingual in English and French in 2006 were approximately 95% for all age groups.

In the rest of Canada, English-French bilingualism retention rates were generally lower, particularly within certain groups, such as children and youth with a mother tongue other than English or French, those with parents who were not bilingual or who were less educated, those in a lower family income quintile, those living in a municipality with a low concentration of the minority language group, and those in older age groups. In Canada outside Quebec, bilingual youth aged 14 to 17 in 2006 had a lower retention rate (56%) than that observed in children aged 5 to 7 the same year (82%). In Canada outside Quebec, finishing school and entering the labour market are factors often associated with a significant reduction in contact with the French language.26

Chart 5, which combines information on area of residence and age group in 2006 and mother tongue, illustrates the differences in English–French bilingualism retention rates in Quebec and in Canada outside Quebec. A high level of bilingualism retention (greater than 90%) was recorded for children and youth with French as a mother tongue, regardless of age group, in both Quebec and Canada outside Quebec. The same was found for children and youth with English as

Chart 5
English–French bilingualism retention rate in 2016 among children and youth who were bilingual and aged 5 to 17 in 2006, by age group and mother tongue, Canada outside Quebec and Quebec



Source: Statistics Canada, integrated 2006 and 2016 census data.

a mother tongue and those with a mother tongue other than English or French in Quebec.

In contrast, the retention rates were significantly lower among children and youth living in Canada outside Quebec who listed English as their mother tongue, or a mother tongue other than English or French particularly if they were aged 14 to 17 in 2006. For example, among those who had English as mother tongue, one half (50%) of bilingual teenagers aged 14 to 17 in 2006 were no longer able to hold a conversation in their second official language in 2016, when they were aged 24 to 27. The decline in bilingualism was even more pronounced among bilingual youth aged 14 to 17 in 2006 with a mother tongue other than English or French. In this group, among those who were bilingual in 2006, 37% were still bilingual in 2016.

### **Conclusion**

According to the Action Plan for Official Languages 2018–2023, increasing English–French bilingualism in Canada is one of the Government of Canada's priorities with respect to official languages. In this context, particular attention is placed on children and youth within programs designed to promote bilingualism in English and French, because they are more likely than individuals in older age groups to learn both official languages.

Over the past 10 years, there has been an increase in the English–French bilingualism rate in children and youth, both in Quebec and in the rest of Canada. However, this increase did not have the same scope or repercussions in terms of the evolution of bilingualism in Quebec and the rest of Canada.

In Quebec, children and youth have a higher tendency to retain their English–French bilingualism. The increase in the bilingualism rate among children and youth living in Quebec, and the retention rate as they get older, has directly contributed to the growth of English–French bilingualism in Quebec. Furthermore, contrary to what has been observed in Canada outside Quebec, a high proportion of children and youth become bilingual later in life.

This was not the case in Canada outside Quebec. Approximately one-third of a cohort of children and youth aged 5 to 17 who were bilingual in English and French in 2006 were no longer bilingual 10 years later. The English-French bilingualism retention rate was significantly higher among younger children (aged 5 to 7 in 2006) who attended school over the entire 10-year study period. Children and youth living outside Quebec are not only more likely to lose their language skills, but those who are not bilingual are less likely to become bilingual as they transition to adulthood.

Various measures have been implemented to help reverse these trends and mitigate the effect of factors that negatively affect the growth of English—French bilingualism in Canada outside Quebec and—consequently—the overall English—French bilingualism rate in Canada. These measures include supporting French as a second language courses and offering scholarship programs and internships that foster the acquisition and retention of the second official language.

According to population projections, the English–French bilingualism rate should continue to rise in Quebec over the next few years and exceed 50% by 2036. This expected growth in Quebec should contribute to a slight increase in English–French

bilingualism for Canada as a whole over the next 20 years. However, in Canada outside Quebec, it may be difficult to increase the English–French bilingualism rate without an increase in the retention rate

among people who have learned both official languages (including a large number of children and youth).

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### Data sources, methods and definitions

#### **Data sources**

This study is based on data from the 2006 and 2016 censuses of population, as well as integrated census data from 2006 and 2016—a new dataset consisting of answers from respondents to both the 2006 and 2016 Census of Population long-form questionnaires. This makes it is possible to track changes in respondent bilingualism over a 10-year period.

The subsample of the new dataset used in this study consisted of children and adolescents who were aged 5 to 17 in 2006. The subsample included 177,290 respondents.

#### Logistic regression analysis and predicted probabilities

Many characteristics associated with bilingualism are closely linked to one another, which makes it sometimes difficult to determine which one has the most influence on bilingualism. To better understand the impact these characteristics have on bilingualism, two logistic regression models were developed: one for Canada outside Quebec and one for Quebec. Logistic regression coefficients were used to estimate the predicted probability of a positive result (1) for each child in the sample.

The predicted probabilities in the tables represent the mean of the predicted rates for a specific group.

Since nearly all of the children and youth in the cohort that was studied were living with their parents in 2006, it is reasonable to conclude that very few of them personally answered the question on knowledge of official languages. However, in 2016, it was possible that some of the children and youth, particularly those aged 20 to 27, were no longer living with their parents. It is also possible that their perception of their ability to hold a conversation in both official languages differed from that of their parents, which could have influenced the English-French bilingualism rate and affected the study's findings. To verify this, analyses took into account the fact that some of respondents were living with their parents in 2016, while others were not. In the end, whether or not the children and youth were living with their parents did not have an impact on the study's findings. In Canada outside Quebec in particular, the predicted probability of being bilingual in English and French was exactly the same for youth aged 15 to 27 who lived with their parents and those who did not live with their parents.

#### **Notes**

- I. Part IV of the Official Languages Act stipulates that services in the minority official language must be provided where there is significant demand.
- 2. See Bialystok (2011).
- 3. See Golash-Boza (2005); Diaz (2018).
- 4. See Christofides and Swidinsky (2010); Diaz (2018).
- See Lehtonen et al. (2018). According to this analysis, bilingualism has a very slight non-zero effect on certain executive functions (inhibition, cognitive flexibility, working memory), but has no effect on attention.
- See Cox et al. (2016); Paap et al. (2015); Morton and Harper (2007).
- 7. Furthermore, one of the roles of the Royal Commission on Bilingualism and Biculturalism was to "recommend what could be done to enable Canadians to become bilingual" (Government of Canada, 1967). In other words, for federal institutions to provide bilingual services, there have to be enough Canadians who are bilingual.
- 8. Office of the Commissioner of Official Languages, (accessed January 23, 2019).
- According to the most recent language projections, the English–French bilingualism rate could be between 18.3% and 18.8% in 2036 (Houle and Corbeil 2017).
- 10. See Lepage and Corbeil (2013).
- 11. See Houle and Corbeil (2017).
- 12. The Census of Population measures active bilingualism (the ability to hold a conversation in English and French), but does not measure passive bilingualism (the ability to understand English and French). Some people may lose their ability to express themselves in their second official language over time, but retain the ability to understand it.
- For more information on the evolution of English– French bilingualism in Canada since 1901, see Houle and Corbeil (2016).

- 14. According to the reference scenario used in the language projections, the English–French bilingualism rate in Quebec could exceed 50% by 2036, up 9 percentage points from 2011. In comparison, these same projections predict a drop in the English–French bilingualism rate in five other provinces: -0.8 percentage points in Ontario, -0.2 points in British Columbia, -0.2 points in Alberta, -0.7 points in Manitoba and -0.3 points in Nova Scotia, and a slight increase in other provinces (by less than 1.5 percentage points) (Houle and Corbeil 2017).
- 15. Statistics Canada, Table 37-10-0009-01. French immersion programs do not include Anglophone children attending francophone schools.
- 16. In Quebec, the increase in the English–French bilingualism rate was also observed in other age groups. From 2006 to 2016, the English–French bilingualism rate in Quebec rose from 40.6% to 44.5%, while the rate dropped from 10.2% to 9.8% in the rest of Canada. Furthermore, 74% of the growth in the number of English–French bilingual individuals between 2006 and 2016 was attributable to Quebec (568,540 new bilingual individuals in Quebec from 2006 to 2016, compared with 767,220 in the rest of Canada).
- 17. For example, from 1989 to 2009, there was a significant increase in the proportion of Quebec youth aged 15 to 34 who consumed a variety of cultural offerings "in English and French equally" rather than "mostly in French" (e.g., listening to music, attending performances, reading books) (Office québécois de la langue française 2016). Likewise, from 2012 to 2018, the proportion of francophone youth who were indifferent to a non-French greeting in Montréal-area businesses more than doubled, from 26% to 55% (Office québécois de la langue française 2019). Lastly, some studies have found that francophone children and youth in Quebec have shown a growing interest in learning and using English in their daily activities (Pagé 2014).

- 18. This finding supports the principle that children and youth are the people most likely to acquire a second official language. Likewise, according to census data (not presented in this study), the English–French bilingualism rate among the adult population with a mother tongue other than English or French (primarily with an immigrant background) tended to be lower than the rate observed in the population with English as a mother tongue.
- 19. Although data were not available for all of Canada outside Quebec, they were available for Ontario. In 2016/2017, 55% of the children and youth enrolled in French immersion programs in Ontario were female.
- 20. See Statistics Canada (2017).
- 21. See Lepage and Corbeil (2013).

- 22. See Houle and Corbeil (2017).
- 23. See Childs et al. (2018).
- 24. See Chen et al. (2016).
- 25. See Feliciano (2006); Childs et al. (2018).
- 26. That being said, some bilingual youth living in Canada outside Quebec, particularly Anglophones enrolled in a French immersion program, were far more likely to have maintained their language skills by the end of high school (Allen 2008). However, census data do not make it possible to determine who was enrolled in these programs and who was not. It was also not possible to determine which Anglophones had attended a Frenchlanguage school.

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