



# **Literacy in Canada Disparity Between Francophones and Anglophones**

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A data analysis from the 1994 International Adult Literacy Survey



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## Introduction

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Canada is a country of great diversity—geographic, cultural, economic and social—and studies that deal with any of the great fundamental topics must take this into account. Indeed, the International Adult Literacy Survey (IALS) conducted in the fall of 1994 found that in Canada, there are major disparities in Canadians’ level of literacy among regions, linguistic groups and various other population categories.

Following its action plan to apply section 41 of the *Official Languages Act*,<sup>1</sup> Statistics Canada assumed the mandate of encouraging analytical research on the needs of Canada’s official language minorities. The present literacy study highlights the main differences between the linguistic groups. Literacy is of great importance, since it is a prime indicator of the economic and social vitality of the different linguistic communities.

In the past, the term “literacy” meant the ability to read and write; but in our modern societies, which are constantly absorbing changes in science and technology, the mere fact of being able to read and write is no longer an adequate indicator of individuals’ ability to process information in their daily lives. For this reason, the concept of literacy is being broadened to emphasize individuals’ daily use of their skills within society, and more especially their skills in processing written information, whether numeric or word-based.

Drawing on the results of the IALS tests, Statistics Canada has divided literacy into five skill levels, from the lowest to the highest (levels 1 to 5). The measure of literacy thus defined, as shown in Table 1, reflects a structured continuum of degrees of literacy.<sup>2</sup> As the Canadian report on the IALS points out (p. 14), the IALS test items have a “collective capacity to predict, with a high degree of certainty, whether a respondent

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<sup>1</sup> This section states that “[t]he Government of Canada is committed to enhancing the vitality of the English and French linguistic minority communities in Canada and supporting and assisting their development; and fostering the full recognition and use of both English and French in Canadian society.”

would be able to handle unfamiliar texts with similar attributes of difficulty.” In testing adults’ literacy skills, “IALS deals both with text and print decoding skills, and with decision skills.” What the survey sets out to determine is “whether [adults] can read well enough to get the correct answers on test items that represent the range of difficulty found in tasks that they encounter in their daily lives.”

The 1994 survey is not the first of its kind carried out by Statistics Canada, for in 1989, the Survey of Literacy Skills Used in Daily Activities (LSUDA) was conducted. It served to estimate individuals’ reading and numeracy skills, although in a much more limited and therefore less thorough manner than was done in the 1994 survey.<sup>3</sup> Thus, the results obtained from the LSUDA, along with the issues that they raised, made it possible to produce a survey that was more thorough, from the standpoint of both methodology and content.

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<sup>2</sup> For any information on the IALS methodology, including the techniques used to construct scales, please see Appendix B of the Statistics Canada document *Reading the Future: A Portrait of Literacy in Canada* (Cat. No. 89-551-XPE).

<sup>3</sup> In fact, the 1989 survey focused more on accurately measuring the lower skill levels, while the 1994 survey primarily sought to make a better distinction between the higher levels (that is, levels 3 and 4 of the 1989 survey).

Table 1  
Scale Score Ranges and Task Samples

Level	Score	Prose	Document	Quantitative
1	0–225	Use the instructions on the bottle to identify the maximum duration recommended for taking aspirin.	Identify the percentage of Greek teachers who are women by looking at a simple pictorial graph.	Fill in the figure on the last line of an order form, "Total with Handling," by adding the ticket price of \$50 to a handling charge of \$2.
2	226–275	Identify a short piece of information about the characteristics of a garden plant, from a written article.	Identify the year in which the fewest Dutch people were injured by fireworks, when presented with two simple graphs.	Work out how many degrees warmer today's forecast high temperature is in Bangkok than in Seoul, using a table accompanying a weather chart.
3	276–325	State which of a set of four movie reviews was the least favourable.	Identify the time of the last bus on a Saturday night, using a bus schedule.	Work out how much more energy Canada produces than it consumes, by comparing figures on two bar charts.
4	326–375	Answer a brief question on how to conduct a job interview, requiring the reader to read a pamphlet on recruitment interviews and integrate two pieces of information into a single statement.	Summarize how the percentages of oil used for different purposes changed over a specified period, by comparing two pie charts.	Calculate how much money you will have if you invest \$100 at a rate of 6% for 10 years, using a compound interest table.
5	376–500	Use an announcement from a personnel department to answer a question that uses different phrasing from that used in the text.	Identify the average advertised price for the best-rated clock radio in a consumer survey, requiring the assimilation of several pieces of information.	Use information on a table of nutritional analysis to calculate the percentage of calories in a Big Mac that comes from total fat.

Source: Statistics Canada (Cat. No. 89-551-XPE)

## A Few Highlights of the IALS<sup>4</sup>

The 1994 survey led to a number of findings, included the following:

- Important differences in literacy skills exist, both within and among countries. These differences are large enough to matter both socially and economically. The differences in skill observed in Canada across demographic groups are large.
- Literacy is strongly associated with economic life chances and opportunities. This affects employment stability, the incidence of unemployment, and income, among other things.
- In North America, scores on the quantitative literacy scale provide the strongest correlates to income. There is a large “income bonus” in Canada and the United States for literacy proficiency at the highest level (Level 4/5).
- Literacy’s relationship to educational attainment is complex. While the association with education is strong, it also offers some surprising exceptions. For example, some adults have managed to attain a relatively high degree of literacy proficiency despite a low level of education. Conversely, there are some who have low literacy skills despite a high level of education. Objective skill testing is obviously emerging as a preferred tool to enable more rigorous evaluation of the real skills of the work force.
- Low literacy skill levels are found not just among marginalized groups, but also among large proportions of the entire adult population. The IALS data show that adult education and training programs are less likely to reach those with low skills, because most training goes to those with high skills.
- Literacy skills, like muscles, are maintained and strengthened through regular use. While formal education provides a more or less required base, the evidence indicates that applying literacy skills in daily activities—both at home and at work—is associated with higher levels of performance.

## Literacy and Language

One of Canada’s fundamental characteristics—its linguistic duality—was reflected in the IALS results by differences in literacy levels between the two main linguistic groups. Of course, comparisons between Anglophones and Francophones<sup>5</sup> have always aroused interest and passion. Many factors—historical, political, economic and social—explain the similarities and differences between Francophones and Anglophones in Canada. As already noted, individuals’ literacy skills are closely linked to their level of

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<sup>4</sup> The highlights listed here are drawn directly from the Statistics Canada publication *Reading the Future: A Portrait of Literacy in Canada*, © 1996, (Cat. No. 89-551-XPE), which were in turn derived from the conclusions of the report *Literacy, Economy and Society: Results of the first International Adult Literacy Survey* (Organization for Economic Co-operation and Development and Statistics Canada, 1995).

<sup>5</sup> Defined on the basis of mother tongue, that is, **in the IALS**, the first language spoken in childhood.

schooling. And a brief look backward will show that until relatively recently, the disparities between Anglophones and Francophones were still substantial in many respects. Thus, the third volume of the report of the Royal Commission on Bilingualism and Biculturalism, published in the late 1960s, stated that both socially and economically, Francophones were in a much more disadvantaged position than Anglophones in the employment sector. As a group, Francophones consistently ranked much lower with respect to average income, levels of schooling, occupation scales and ownership of industries.

Using 1961 Census data on the ethnic origin and level of schooling of men in the nonfarm labour force, the Commission showed that 54% of individuals of French origin had not studied beyond the elementary level, while for those of British origin, the corresponding proportion was 31% (at that time, the national average, all origins combined, was 42%). With regard to university education, while 25.5% of individuals of Jewish origin and 12.5% of those of British origin had a university degree, only 6.3% of individuals of French origin had such a degree.

Twenty to thirty years later, this time using data on mother tongue and the threshold of nine years of schooling for the population as a whole aged 15 and over, Table 2 below shows that there is still a sizable gap between Anglophones and Francophones but that it is tending to shrink, to judge from the narrowing of the gap in each province and territory between 1981 and 1996. The persistence of this gap is largely a holdover from times past. Thus, while there was a gap of 11.5 percentage points between the proportions of individuals aged 15 and over in Canada with less than 9 years of schooling in the two linguistic groups, the gap was 3.9 points for youths aged 20 to 24, whereas it reached 30.6 points for individuals aged 65 and over.

Table 2

Population 15 and Over With Less Than 9 Years of Schooling,  
by Mother Tongue<sup>6</sup> (Canada, Provinces and Territories), 1981-1996

	1981			1996		
	French	English	Differ- ence	French	English	Differ- ence
Newfoundland	27.0	33.3	-4.7	21.6	17.8	3.8
Prince Edward Island	49.9	24.6	25.3	28.0	12.9	15.1
Nova Scotia	36.8	21.2	15.6	21.3	10.9	10.4
New Brunswick	42.5	24.8	17.7	26.3	12.1	14.2
Quebec	29.8	18.6	11.2	18.5	10.9	7.6
Ontario	28.5	14.1	14.4	15.9	6.4	9.5
Manitoba	29.1	14.6	14.5	16.5	7.3	9.2
Saskatchewan	31.4	16.6	14.8	20.9	8.9	12.0
Alberta	21.6	10.0	11.6	12.2	4.6	7.6
British Columbia	22.4	10.2	12.2	10.6	4.7	5.9
Yukon	15.6	9.6	6.0	4.5	6.3	1.8
NWT	19.2	14.5	4.7	7.9	7.4	0.5
Canada	30.1	14.7	16.4	18.5	7.0	11.5

Sources: 1981 and 1996 censuses.

### An Overall Portrait of Literacy in Canada

Table 3 shows the distribution of the Canadian population according to the skill levels of individuals in each province. It is immediately apparent that the disparities among provinces are quite substantial. In particular, an examination of the higher levels 4 and 5 reveals that Quebec is considerably below the national average of 20%, with only 8% of individuals who obtained a score of more than 375 in the prose tests. On the other hand, Ontario and the Western provinces are 5 percentage points above the national average. The situation is similar for the other literacy scales. By contrast, Quebec is overrepresented at level 1 on all three scales in relation to the other provinces, although it ranks very near the Atlantic provinces.

<sup>6</sup> Anglophones and Francophones include persons who gave English or French respectively as a single response or part of a multiple response to the question on mother tongue.



Table 3  
 Percentage Distribution of Population on the Three Scales by Skill Level, by Region of Canada  
 (Adults Aged 16 and Over), 1994.

	Prose scale Level			
	1	2	3	4/5
<b>Canada</b>	<b>22</b>	<b>26</b>	<b>33</b>	<b>20</b>
New Brunswick	28	31	25	16
Other Atlantic provinces	24	23	40	14
Quebec	26	28	39	8
Ontario	19	28	28	25
Western provinces	18	24	34	25

	Document scale Level			
	1	2	3	4/5
<b>Canada</b>	<b>23</b>	<b>24</b>	<b>30</b>	<b>22</b>
New Brunswick	29	30	24	16
Other Atlantic provinces	28	24	35	13
Quebec	31	27	29	13
Ontario	21	22	31	26
Western provinces	19	25	29	35

	Quantitative scale Level			
	1	2	3	4/5
<b>Canada</b>	<b>22</b>	<b>26</b>	<b>32</b>	<b>20</b>
New Brunswick	25	34	27	14
Other Atlantic provinces	22	29	32	17
Quebec	28	32	30	10
Ontario	20	23	34	23
Western provinces	18	24	33	25

Source: IALS, 1994.

If we now look at the results according to the main linguistic groups that interest us here, we can see from Table 4 that the disparities are substantial. Thus, on the prose scale, three times as many Anglophones (27%) as Francophones (9%) in Canada as a whole are at the highest skill level, while twice as many Francophones (25%) as Anglophones (13%) are at the first level.<sup>7</sup>

The disparities are also sizable for the other two scales, other than the fact that the proportion of Francophones at level 4/5 on the document scale is 5 points higher. Another

<sup>7</sup> While the data used are reliable, the estimates derived from these data have a certain level of error associated with sampling. It is therefore important to consider confidence intervals when drawing conclusions from these data, since these intervals are designed to take account of estimation error. Thus, in considering these intervals, the conclusion that twice as many individuals in the English group as in the French group are at the higher level would be just as valid.

observation concerning that level is that the gap between Anglophones and Francophones is greatest in Ontario. On the prose scale, only 8% of Franco-Ontarians are at the highest level, compared to 30% of Anglophones in that province. The gap is similar for the other proficiency scales. However, a glance at level 1 shows that the largest gap between the two linguistic groups is in New Brunswick.<sup>8</sup>

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<sup>8</sup> It is important to note here that in this survey, respondents could opt for either English or French as the language of their choice. The following table gives an idea of respondents' choices:

Use of French Among Respondents Reporting French as Their Mother Tongue, by Province of Residence (in Percentage)

	Atlantic	N.B.	Quebec	Ontario	West
Mother tongue	100.0	100.0	100.0	100.0	100.0
Language of interview	2.2	96.4	99.8	67.8	16.9
Language of tests	1.5	88.5	99.4	52.4	4.1

Source: IALS, 1994.

Table 4

Percentage Distribution of the Population on the Three Scales by Skill Level, by Mother Tongue,<sup>9</sup> for Main Francophone Regions of Canada (Adults Aged 16 and Over), IALS (1994)

	Prose scale Level			
	1	2	3	4/5
<b>French</b>	<b>25</b>	<b>27</b>	<b>39</b>	<b>9</b>
New Brunswick	36	32	21	11
Quebec	23	26	41	9
Ontario	29	31	32	8
<b>English</b>	<b>13</b>	<b>25</b>	<b>35</b>	<b>27</b>
New Brunswick	17	30	30	23
Quebec <sup>10</sup>	...	...	...	...
Ontario	12	26	32	30
	Document scale Level			
	1	2	3	4/5
<b>French</b>	<b>29</b>	<b>27</b>	<b>29</b>	<b>14</b>
New Brunswick	38	28	23	12
Quebec	28	28	30	15
Ontario	30	30	27	13
<b>English</b>	<b>15</b>	<b>23</b>	<b>35</b>	<b>28</b>
New Brunswick	19	34	25	23
Quebec	...	...	...	...
Ontario	15	20	35	30
	Quantitative scale Level			
	1	2	3	4/5
<b>French</b>	<b>26</b>	<b>32</b>	<b>31</b>	<b>11</b>
New Brunswick	31	34	26	9
Quebec	25	32	32	11
Ontario	26	32	31	11
<b>English</b>	<b>14</b>	<b>23</b>	<b>37</b>	<b>26</b>
New Brunswick	16	34	28	21
Quebec	...	...	...	...
Ontario	14	21	37	28

<sup>9</sup> Regardless of whether the language used is the mother tongue or the language in which the respondent expresses him/herself most easily, the skill levels are basically the same. As to the language of the test booklets serving to establish the respondent's level of competence on the three scales, its use instead of mother tongue does not substantially change the results. However, it should be noted that in regions other than the main ones in which the Francophone population is concentrated, namely Quebec, New Brunswick and Ontario, the skill levels differ substantially for Francophones who chose to respond using booklets in English, but the size of the samples is such that the margins of error associated with them are too large to warrant examining them more closely.

<sup>10</sup> The sample size is too small to allow for reliable estimates. It should be noted that in the 1989 survey, a larger sample of Quebec respondents with English as their mother tongue yielded reliable results (see Table 5).

For Quebec, considering the smallness of the Anglophone sample, it is necessary to rely on the results of the 1989 survey. In that survey, it was found (Table 5) that Anglophones in that province also did better in the tests of reading and numeracy skills than Francophones. While, as noted above, the 1994 survey was more thorough than the 1989 survey for purposes of assessing individuals' literacy skill levels, the 1989 survey provides a similar overall picture. Whereas in 1994 the gap between Anglophones and Francophones in Canada on the prose scale (levels 3 to 5 combined) was 14 percentage points, the gap was 13 points in 1989 for level 4 on the reading scale, as well as on the numeracy scale.

The 1989 survey also showed that Quebec had the largest disparities between Anglophones and Francophones (13 percentage points at the highest level of the reading scale and 17 points on the numeracy scale). Furthermore, while New Brunswick had the smallest gap between Anglophones and Francophones on the reading scale (a gap of 6 points, compared to 9 points for Ontario), Ontario had the smallest gap between the two linguistic groups (9 points, compared to 15 for New Brunswick) on the numeracy scale. The 1989 survey also showed New Brunswick Francophones doing poorly in the numeracy tests.

Table 5  
 Percentage Distribution of Population on the Three Scales by Skill Level, by Mother Tongue, for Selected Provinces (Adults Aged 16 and Over), 1989

	Reading skill Level <sup>11</sup>	
	1-3	4
<b>French</b>	<b>42</b>	<b>58</b>
New Brunswick	43	57
Quebec	42	58
Ontario	38	62
<b>English</b>	<b>29</b>	<b>71</b>
New Brunswick	37	63
Quebec	29	71
Ontario	29	71
	Numeracy skill Level	
	1-2	3
<b>French</b>	<b>46</b>	<b>54</b>
New Brunswick	56	44
Quebec	47	53
Ontario	42	58
<b>English</b>	<b>33</b>	<b>67</b>
New Brunswick	41	59
Quebec	30	70
Ontario	33	67

Source: LSUDA, 1989.

Appendix A presents the different results of the IALS for Anglophones and Francophones in terms of mean score. Figure A1 shows, firstly, that on the three proficiency scales, the gap in mean scores between Anglophones and Francophones was significant, as was the gap between Quebec Francophones and Francophones outside Quebec. The other three figures (A2 to A4) show the mean scores of Anglophones and Francophones in the regions and provinces considered. It is worth noting that in Quebec, there is no significant difference between the two linguistic groups for any of the three literacy scales.

<sup>11</sup> Reading skill level 4 in the 1989 survey is approximately equivalent to literacy levels 3, 4 and 5 in the 1994 survey.

While there is no doubt, according to tables 4 and 5, that significant differences exist between the literacy levels of Anglophones and Francophones in Canada, it is important to identify the main factors that may serve to explain these differences.

## Education

The level of schooling is probably the main factor that comes to mind to explain gaps in literacy levels. And despite the exceptions noted above, the survey data clearly show that overall, the level of schooling directly influences individuals' skills. We will first look at the distribution of the number of years of schooling completed, by mother tongue and by the province of residence as it appeared in the 1996 Census.

Table 6  
Distribution of Population Aged 15 and Over by Number of Years of Schooling Completed and Mother Tongue, 1996

	Years of schooling completed			
	Less than 9 years	9-13 years	14-16 years	17 years and over
Mother tongue				
French	18.5	40.3	30.2	11.1
English	7.0	43.0	36.6	13.4

Source: 1996 Census.

Table 7  
Distribution of Population Aged 15 and Over by Number of Years of Schooling Completed, Mother Tongue and Province, 1996

Province	Mother tongue	Years of schooling completed			
		Less than 9 years	9-13 years	14-16 years	17 years and over
New Brunswick					
	French	26.3	37.9	27.0	8.8
	English	12.1	43.6	33.7	10.5
Quebec					
	French	18.5	40.4	30.0	11.0
	English	10.9	36.9	34.0	18.3
Ontario					
	French	15.9	40.7	31.2	12.2
	English	6.4	43.6	35.5	14.6

Source: 1996 Census.

Tables 6 and 7 show the gaps between Francophones and Anglophones in Canada. Table 6, like Table 2, shows that 2.6 times as many Francophones (18.5%) as Anglophones (7.0%) completed less than nine years of schooling. But it is worth noting that at the other end of the educational spectrum, the gap between Francophone and Anglophone university graduates (11.1% and 13.4% respectively) is much smaller.

If the provinces where most of Canada's Francophones reside are compared with respect to the distribution of levels of schooling, New Brunswick stands out (Table 7), in that 26.3% of its Francophones did not complete nine years of schooling, as compared to 12% of Anglophones. In Ontario, 15.9% of Francophones and 6.4% of Anglophones were in the same situation, compared to 18.5% of Francophones and 10.9% of Anglophones in Quebec. At the opposite end of the spectrum, respectively 8.8% and 12.2% of Francophones in New Brunswick and Ontario completed a minimum of 17 years of schooling, compared to 11% of Francophones in Quebec.

The level of schooling completed largely explains the disparities in literacy between the two main linguistic groups. Controlling for level of schooling—that is, examining mean literacy scores of Anglophones and Francophones who have attained the same level or schooling—the following figures (1, 2 and 3) clearly show the role that education plays in individuals' literacy skills.

Not only do skill levels rise as the number of years of schooling increases, but the gap between Francophones and Anglophones narrows considerably in the case of Francophones living outside Quebec, and it disappears completely in the case of Quebec Francophones. For the latter, on the prose scale, only the gap for individuals who completed at least 17 years of schooling is significant, while on the document scale, the gap is significant among individuals who completed 12 years of schooling, as well as among those who completed at least 17 years of schooling. But at the latter level, the mean score of Francophones is even higher than that of Anglophones. Lastly, on the quantitative literacy scale, the gap between Anglophones and Francophones is not significant at any level of education for Francophones residing in Quebec, while it is significant for those residing elsewhere in Canada.

Figure 1

Mean Score by Mother tongue and Number of Years of Schooling Completed  
Prose Scale (Population Aged 16 and Over), 1994

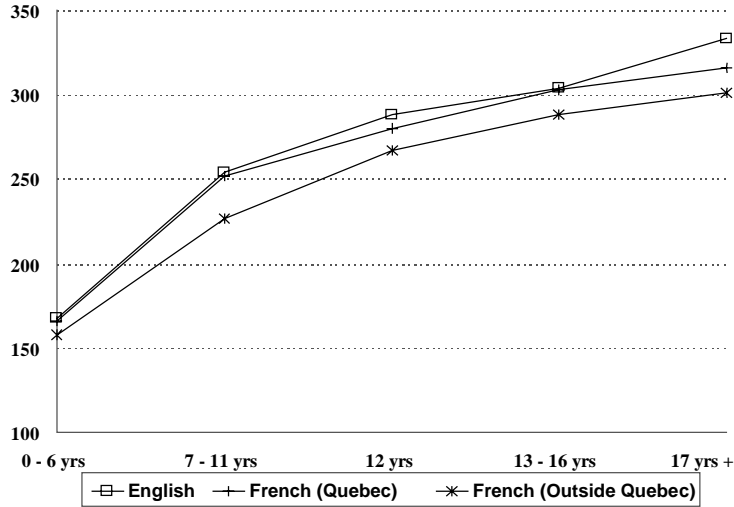


Figure 2

Mean Score by Mother tongue and Number of Years of Schooling Completed  
Document Scale (Population Aged 16 and Over), 1994

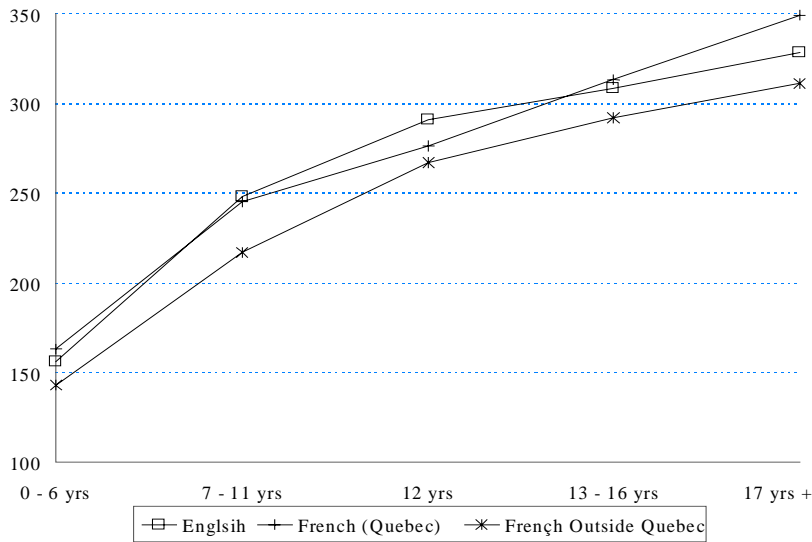
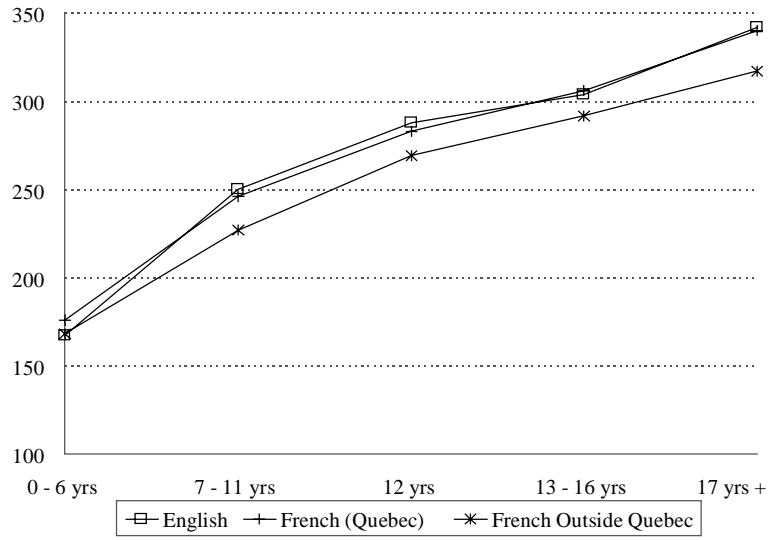




Figure 3

Mean Score by Mother tongue and Number of Years of Schooling Completed  
Quantitative Scale (Population Aged 16 and Over), 1994

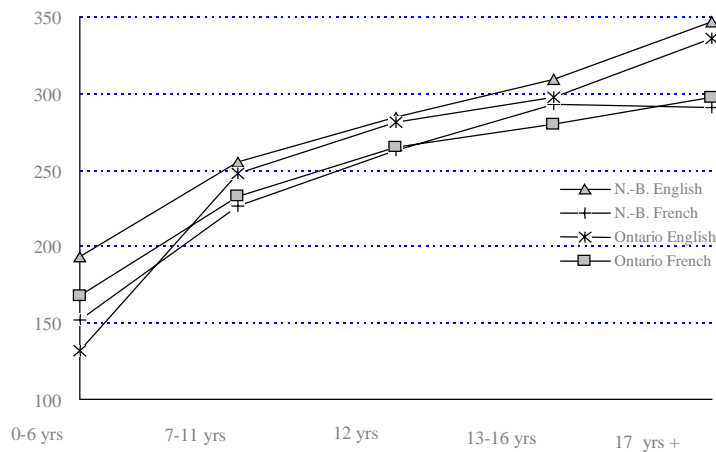


Source: IALS, 1994.

In the specific cases of Ontario and New Brunswick, Figures 4, 5 and 6 show that while the gap in mean scores between the linguistic groups is reduced when level of education is taken into account, this is especially true for Ontario (with some exceptions), whereas in New Brunswick, the gap between the two groups' mean scores, while narrowed, continues to be significant.

Figure 4

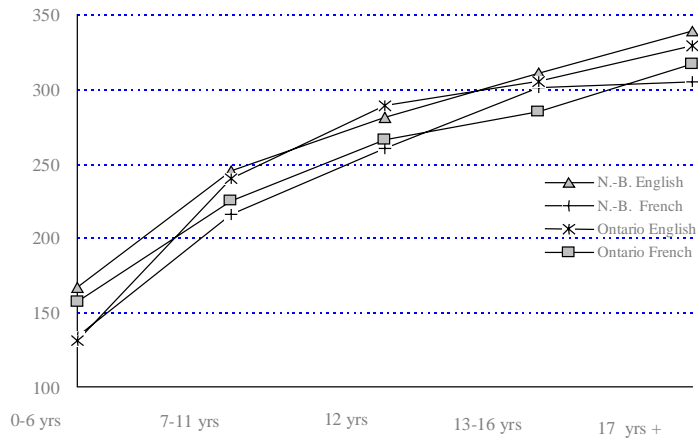
Mean Score by Mother Tongue and Number of Years of Schooling Completed  
 Prose Scale (New Brunswick and Ontario)  
 Population Aged 16 years and over, 1994



Source: IALS, 1994.

Figure 5

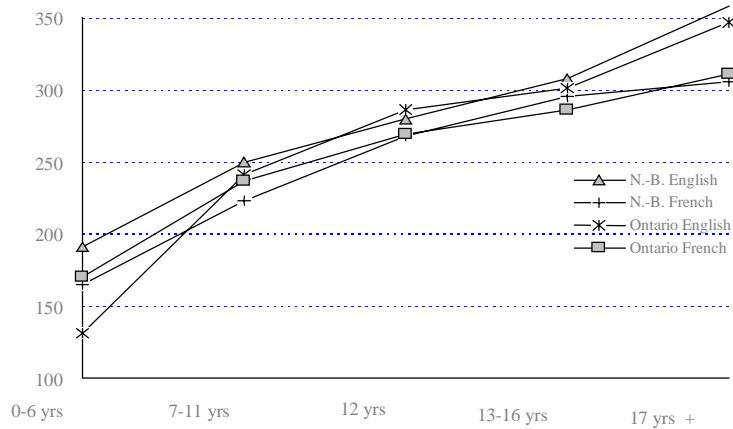
Mean Score by Mother Tongue and Number of Years of Schooling Completed  
Document Scale (New Brunswick and Ontario)  
Population Aged 16 years and Over, 1994



Source: IALS, 1994.

Figure 6

Mean Score by Mother Tongue and Number of Years of Schooling Completed  
Quantitative Scale (New Brunswick and Ontario)  
Population 16 years and Over, 1994



Source: IALS, 1994.

## Sex

As indicated in the report “Reading the Future” and as illustrated by figures 7 and 8, females perform much better than males in the prose literacy tests. Thus, whereas 21% of Anglophone males were at the highest level (level 4/5), 34% of females in this linguistic group were at that level. The situation is similar for Francophones, but in a quite different order of magnitude, since the gap between males (8%) and females (11%) is much smaller. Given the narrow gap between Francophone males and females, it is interesting to note that the gap between Francophone and Anglophone females is much greater (23 points) than the gap between males of the two linguistic groups (13 points).

Among Anglophones, the gap between males and females is however much smaller as regards the document literacy tests (3 points), and this time the gap is in favour of males. Among Francophones, the gap between females and males is 5 percentage points, and as in the case of prose literacy tests, there is a larger proportion of females at the higher skill level.

The situation is reversed in the results of the quantitative literacy tests. For Anglophones, a larger proportion of females (22%) than of males (18%) are at the higher level (4/5), whereas for Francophones, more males (13%) than females (9%) attained this level. Another interesting finding with respect to Francophones is that while a larger proportion of males than of females are at the highest level, it is also true that a larger proportion of males (28%) than of females (23%) were unable to exceed the lowest skill level.

Figure 7

Distribution of the Francophone Population by Level of Literacy,  
by Type of Scale and Gender, Canada, 1994.

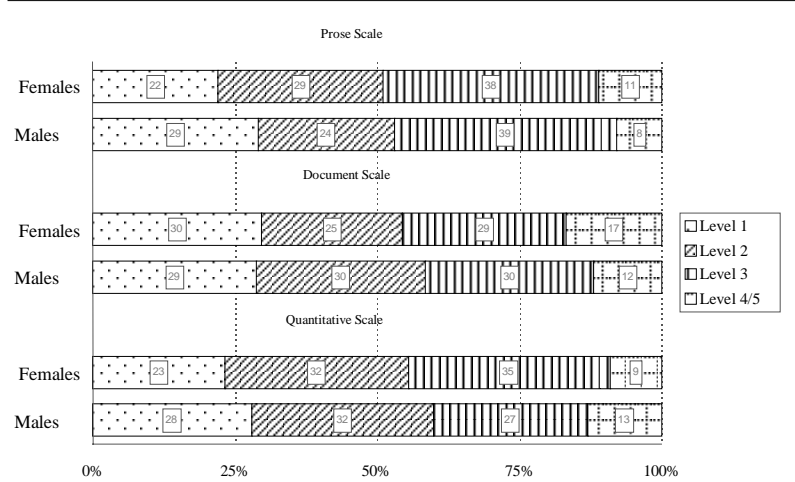
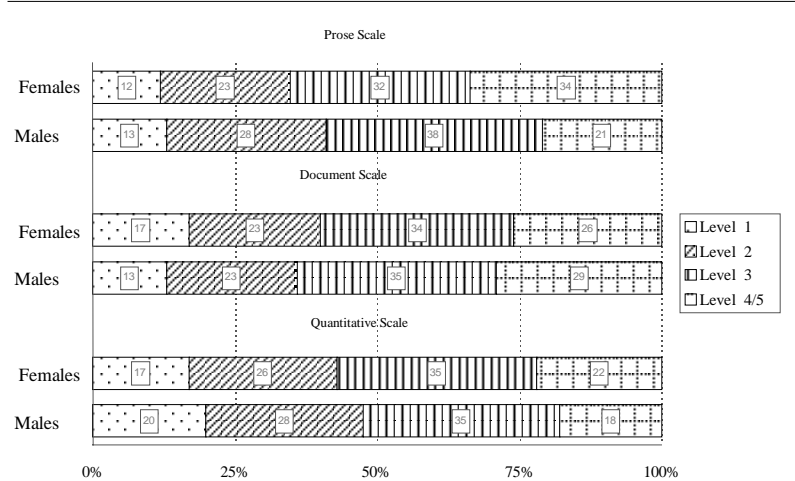


Figure 8

Distribution of the Anglophone Population by Level of Literacy  
by Type of Scale and Gender, Canada, 1994.



Source: IALS, 1994.

## Age Group

Considering the importance of education as a factor influencing literacy levels, it might be expected that because the gaps between Francophones and Anglophones were sizable in the past—say, thirty years ago—and because, while there are still major gaps between the two groups today, more Francophones are educated now than in that earlier period, respondents' age group should be an important factor in determining literacy levels. And indeed, the data show that the improvement in Francophones' educational attainment as shown in Table 2 is mainly due to the remarkable progress of the young. Thus, the percentage of persons aged 25-34 with less than nine years of schooling fell from 31% to 4.4% in 20 years (1971-1991); during the same period, the percentage of persons in this age group who were university graduates more than doubled to 15.5% among Anglophones and 14.3% among Francophones.<sup>12</sup>

The following three figures show, firstly, that literacy levels of respondents aged 45 and under are higher than those of other respondents and gradually decline with increasing age, and secondly, that the younger the respondents, the narrower the gaps in literacy levels. In his study entitled *The Literacy Skills of Canadian Youth*, Willms (1997) shows that much of the decrease in literacy levels with increasing age is attributable to the differing levels of schooling of individuals of different ages, and not to aging as such.

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<sup>12</sup> National Literacy Secretariat (1997).

Figure 9

Mean Score by Mother Tongue and Age Group  
Prose Scale (Population aged 16 years and over), 1994

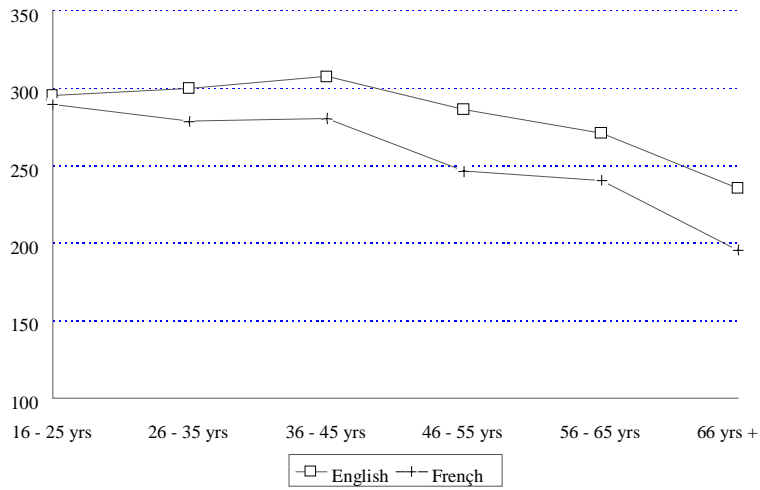
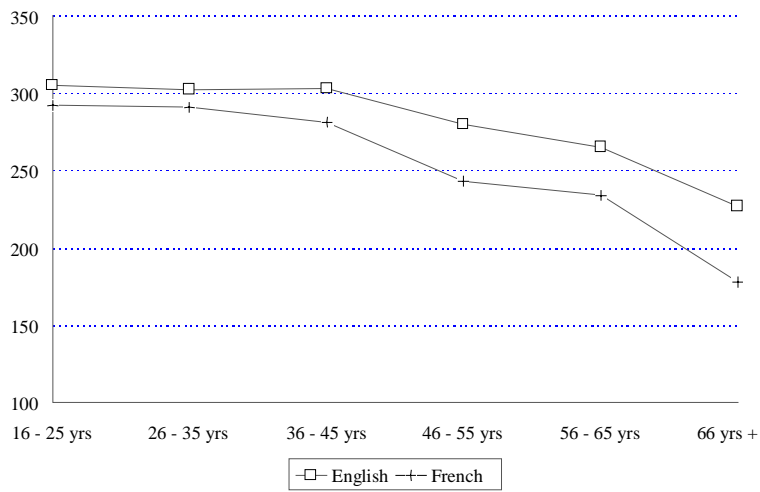


Figure 10

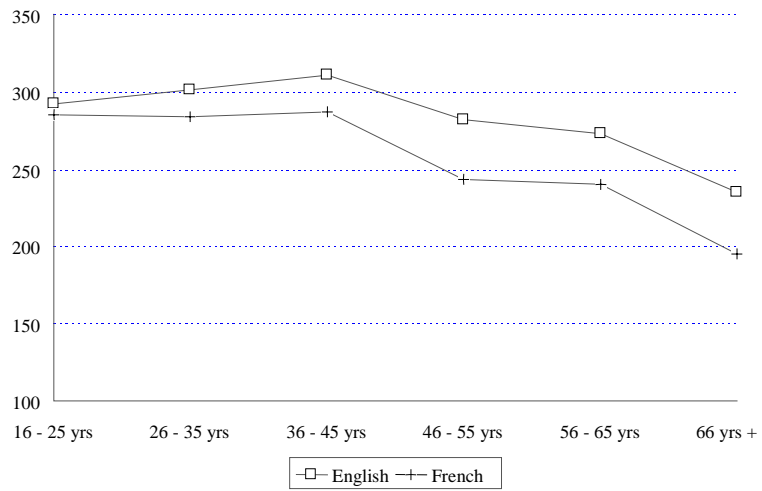
Mean Score by Mother Tongue and Age Group  
Document Scale (Population aged 16 years and over), 1994



Source: IALS, 1994.

Figure 11

Mean Score by Mother Tongue and Age group  
Quantitative Scale (Population 16 years and over), 1994



Source: IALS, 1994.

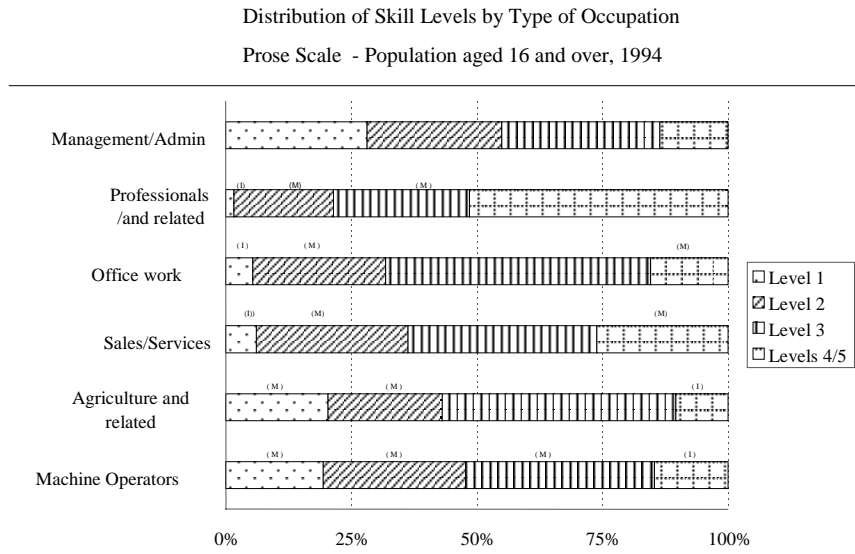


## **Occupation Type**

Since literacy levels are closely related to individuals' level of schooling, it may be hypothesized that a similar relationship may also become evident when the types of occupations practised by these same individuals are examined. Thus it may be expected that individuals working in the fields of management and administration and those working as professionals will have literacy levels that are higher than the average for other workers. Figures 12, 13 and 14 show that the greatest concentration of individuals at the highest literacy levels is to be found among professionals and persons in related occupations. Paradoxically, the managers and administrators category contains the highest proportion of individuals at the lowest literacy level. This situation is probably due to the fact that managers and administrators are present in all industries and at all levels of responsibility. Presumably, a manager of mutual funds or health services will quite likely not have the same literacy skill level as an administrator or manager of a small retail sales company.

Individuals who are employed as office workers appear to have obtained results similar to those of individuals working in sales and services. However, because of the small sample sizes, an adequate comparison cannot be made between the results for these two groups, or between their results and those of other occupational categories.

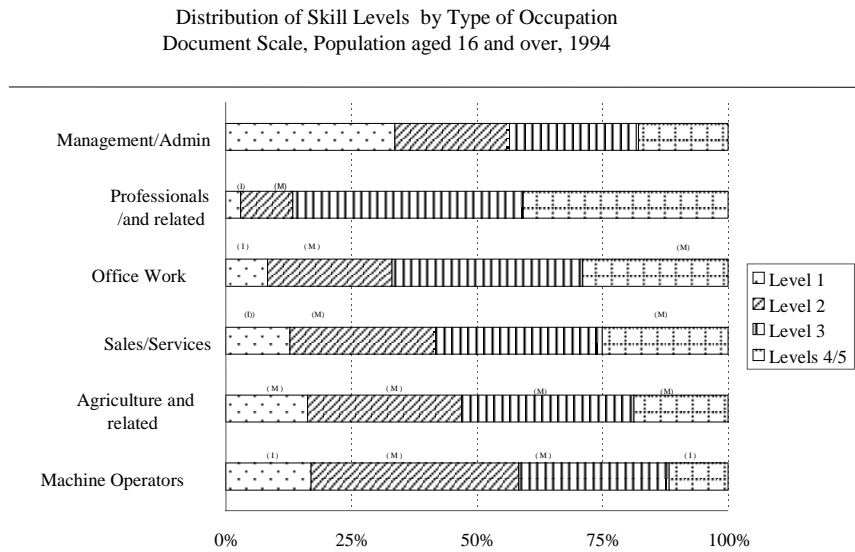
Figure 12



(I): Variation Coefficients related to these estimates are too high to be reliable and do not meet Statistics Canada's Standards of Quality  
(M): Variation Coefficient between 16,6% and 33,3% - high level of error related to the estimates

Source: IALS, 1994.

Figure 13

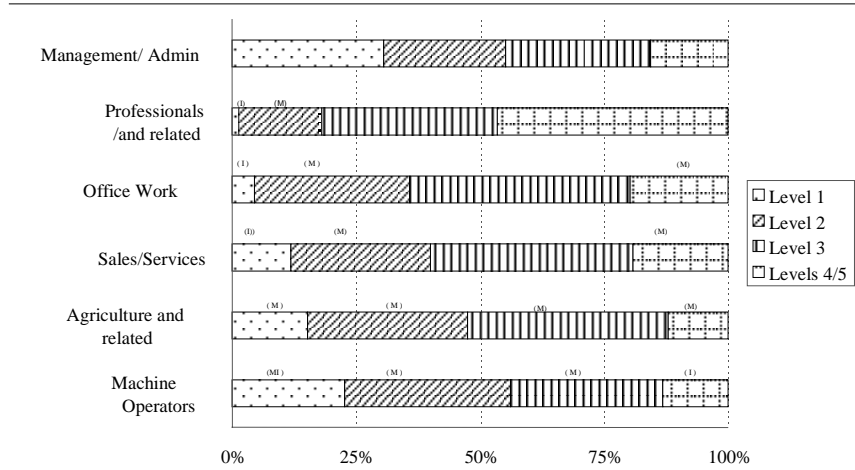


(I): Variation Coefficients related to these estimates are too high to be reliable and do not meet Statistics Canada's Standards of Quality  
(M): Variation Coefficient between 16,6% and 33,3% - high level of error related to the estimates

Source: IALS, 1994.

Figure 14

Distribution of Skill Levels by Type of Occupation  
Quantitative Scale - Population aged 16 and over, 1994

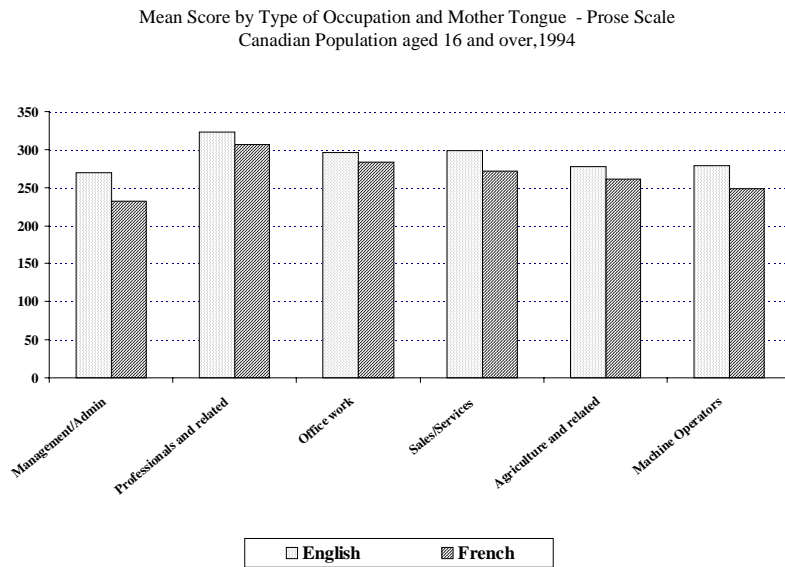


(I): Variation Coefficient between 16,6% and 33,3% - high level of error related to the  
Variation Coefficient between 16,6% and 33,3% - high level of error related to the estimates  
(M): Variation Coefficient between 16,6% and 33,3% - high level of error related to the estimates

Source: IALS, 1994.

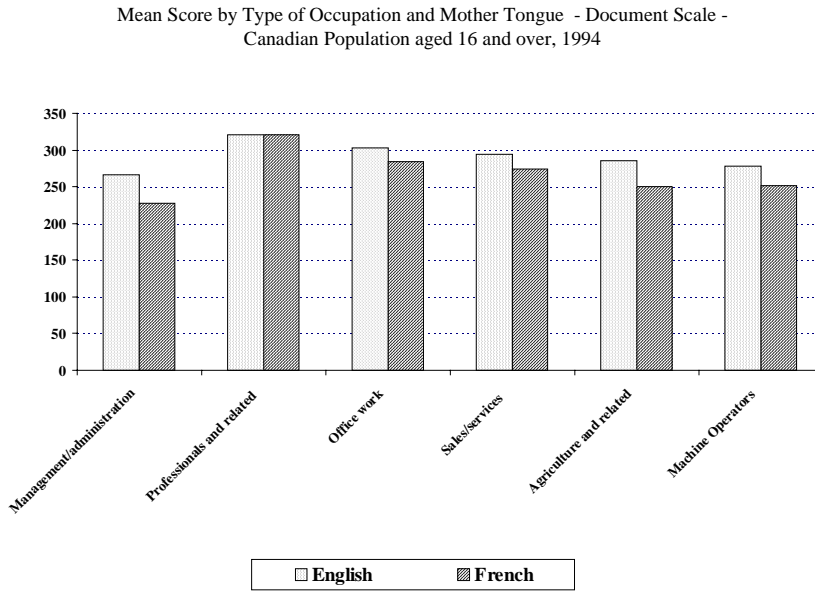
This time we will look at the size of the disparities in mean literacy scores between linguistic groups. Figures 15 to 17 show that these disparities are significant for all occupation types except the professional category, in which there is no marked difference between Anglophones and Francophones on either the document scale or the quantitative scale.

Figure 15



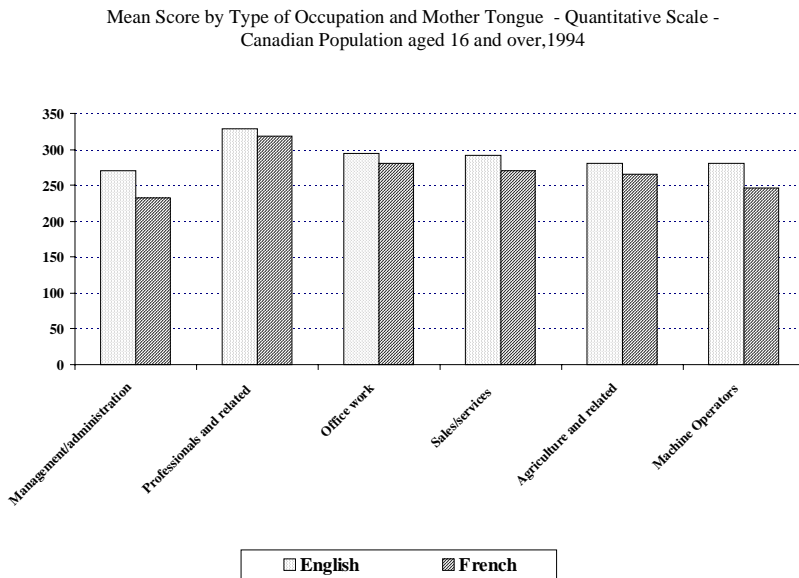
Source: IALS, 1994.

Figure 16



Source: IALS, 1994.

Figure 17



Source: IALS, 1994.

Of course, occupation type in itself explains the disparities in literacy skill only insofar as it refers to a specific ability to perform tasks similar to those encountered in this survey. Furthermore, not only do some jobs and occupations require high levels of literacy, but others also call for maintaining and strengthening the skill levels that individuals already have. Thus, in the 1994 survey, respondents were asked about various literacy-related activities performed at home or at work. Further on we will see that other questions were also asked concerning factors that may directly or indirectly influence literacy levels.

The 1994 survey showed that individuals who held different types of jobs performed writing- and reading-related tasks in varied proportions (1996, p. 57). The frequency with which individuals read or wrote letters or memos, reports, articles, reference works, diagrams or schematics, instructions, etc. depended on whether they worked as a professional, an office clerk or a machine operator. These various reading and writing tasks were also performed in different proportions depending on whether the respondent's mother tongue was English or French. The following three tables show that there are major differences between the two linguistic groups, both in daily activities and in the context of a main job.

Table 8  
Distribution of Population Aged 16 and Over Who Report Reading Information in Each of the Following Categories at Least Once a Month in Their Daily Life, by Linguistic Group, 1994

Mother tongue	Letters, memos	Reports, articles, magazines or journals	Manuals, reference books (including catalogues)	Diagrams or schematics	Invoices, bills, spreadsheets, budget tables	Directions or instructions for medicines, recipes, etc.
English	56	66	50	18	57	57
French	43	63	42	15	55	45

Source: IALS, 1994.

Table 9

Distribution of Population Aged 16 and Over Who Report Reading or Using Information in Each of the Following Categories at Least Once a Week in the Context of a Main Job, by Linguistic Group, 1994

Mother tongue	Letters, memos	Reports, articles, magazines or journals	Manuals, reference books (including catalogues)	Diagrams or schematics	Accounts, bills, spreadsheets, budget tables	Directions or instructions for medicines, recipes, etc.
English	73	59	53	34	54	34
French	70	53	43	31	36	25

Source: IALS, 1994.

Table 10  
Distribution of Population Aged 16 and Over Who Report Writing or Filling out Each of the Following Types of Documents at Least Once a Week in the Context of a Main Job, by Linguistic Group, 1994

Mother tongue	Letters, memos	Forms, things such as statements, invoices or budgets	Reports or articles	Estimates or technical specifications
English	56	50	38	26
French	55	41	48	29

Source: IALS, 1994.

Table 11  
Distribution of Population Aged 16 and Over Who Report Making Arithmetic or Mathematical Calculations at Least Once a Week in the Context of a Main Job, by Linguistic Group, to:

Mother tongue	Measure or estimate the size of an object	Calculate prices, costs or budgets
English	53	53
French	35	41

Source: IALS, 1994.

Among the more striking findings are that 56% of Anglophones read or used information from letters or memos in their daily life, compared to 43% of Francophones. Similarly, 57% of Anglophones used or read information from directions or instructions for medicines, recipes, etc., compared to 45% of Francophones. In the context of a main job, 54% of Anglophones, compared to 36% of Francophones, reported that they read or

used information from bills, invoices, spreadsheets, etc. As regards the use of manuals and reference books, the gap is 10 points between Anglophones (53%) and Francophones (43%). It is worth noting that the gap between Anglophones and Francophones is reversed when it comes to writing articles or filling out or writing reports, with 48% of Francophones engaging in such activities compared to 38% of Anglophones. Possibly, these results may be due to a difference in occupational structures between the two linguistic groups.

Turning now to reading and writing intensity scales,<sup>13</sup> it is apparent from Table 12 that in general, there is a significant gap between Anglophones and Francophones in that the mean reading intensity score is higher among the former than among the latter, both in daily life and in the context of a main job. On the other hand, the mean scores on the writing intensity scale do not show any significant gap between the two groups.

Table 12  
Mean Scores and Standard Deviations for the Canadian Population Aged 16 and Over on an Intensity Scale for Reading and Writing in the Context of a Main Job and in Daily Life, by Linguistic Group, 1994

Mother tongue	Intensity scales					
	Intensity of reading and use in daily life (maximum = 6)		Reading intensity (at job) (maximum = 6)		Writing intensity (at job) (maximum = 4)	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
English	3.0	1.9	3.1	2.2	1.7	1.7
French	2.6	1.5	2.6	1.6	1.7	1.2
	F=57.9	p < .001	F=39.2	p < .001	Difference not significant	

Source: IALS, 1994.

Table 13 shows that as might be expected, there is a direct link between the mean scores on these scales and literacy levels as defined in the survey. Indeed, there is a steady increase in the mean reading intensity scores as the literacy level (shown here on the prose scale) rises.

<sup>13</sup> The reading and writing intensity scales, like the scales for reading in a job context, are constructed by assigning one point to each response where the respondent reported engaging in a reading or writing activity at least once a week (for a possible total of six points). For the intensity scale for reading in a job context, the questions allowed for a maximum score of four points (see 1996: 59).



Table 13  
 Mean Scores and Standard Deviations on Reading and Writing Intensity Scales, by Skill Level on Prose Scale  
 (Canadian Population Aged 16 and Over), 1994

Prose scale	Reading and writing intensity scales					
	Reading and writing intensity in daily life (maximum = 6)		Reading intensity in a job context (maximum = 6)		Reading intensity in a job context (maximum = 4)	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Level 1	1.7	1.2	1.7	1.6	1.2	1.2
Level 2	2.8	1.6	2.5	1.9	1.5	1.4
Level 3	3.2	1.8	3.1	2.0	1.8	1.5
Level 4/5	3.4	2.0	3.4	2.0	1.9	1.6

Source: IALS, 1994.

Additionally, in light of the data presented in Table 14, a direct link may be observed between the skill level on the quantitative scale and the proportion reporting that they do arithmetic or mathematical calculations in the context of their main job. Thus, 29% of Anglophones at level 1 state that they make calculations, compared to 22% of Francophones at the same level. By contrast, 59% of Anglophones at level 4/5 state that they make calculations, compared to 62% of Francophones. In all cases, however, the direction of the causal link cannot be precisely determined. Nevertheless, it seems likely that the influence of the factors is reciprocal insofar as employment sectors that require such tasks to be performed thereby enable the individuals who perform them to maintain or improve their numeracy skill level. At the same time, individuals whose literacy levels are high will perform tasks that their numeracy and reading skills enable them to do.

Table 14  
 Percentage of Population Aged 16 and Over Who Report Having Arithmetic or Mathematical Skills for Calculating Prices, Costs or Budgets at Least Once a Week in the Context of a Main Job, by Skill Level on the Quantitative Scale, by Mother Tongue, 1994

Mother tongue	Level			
	1	2	3	4/5
English	29	48	54	59
French	22	34	45	62

Source: IALS, 1994.

## **General Reading and Writing Activities**

As was seen above, the literacy levels of individuals and linguistic groups do not depend solely on level of schooling. While the latter factor is the most important, others also serve to maintain and in some cases improve individuals' literacy level. At the beginning of this report, it was observed that individuals' literacy skills may be likened to a muscle that is maintained and strengthened through regular exercise. A similar benefit is derived from engaging in reading and writing activities in daily life. Table 15, below, shows that major disparities exist between Francophones and Anglophones in Canada in this regard. According to the data, 28% of Anglophones report visiting a library at least once a month, compared to 18% of Francophones; 56% of Anglophones report reading a book at least once a week, compared to 40% of Francophones; Anglophones write much more than Francophones, to judge from the fact that 41% of Anglophones compared to 26% of Francophones state that they write a letter or other document of more than one page at least once a month. Along similar lines, without establishing any causal link here, we find it noteworthy that 51% of Francophones spend more than two hours a day watching television, while the corresponding proportion of Anglophones is 38%. Lastly, it may be instructive to focus on the finding that 39% of Francophone respondents say their children have a period of time set aside each day for reading, while the corresponding proportion of Anglophone respondents is 53%. If reading becomes an integral part of the daily activities of a young person, it seems likely that the consequences of such a habit will encourage the development of good literacy skills.

Table 15

Proportion of Population Aged 16 and Over Engaging in Selected General Reading and Writing Activities, by Mother Tongue, 1994

	Mother tongue (%)	
	English	French
.Reading newspapers daily	66	54
.Visiting a library at least once a month	28	18
.Writing a letter or other document of more than one page (at least once a month)	41*	26
.Reading books (at least once a week)	56**	40
.Spending time every day watching television or videos (more than two hours a day)	38	51
.Time is set aside each day for children to read (percentage of those who agree with this statement)	53	39

\* At the opposite extreme, the data show that 33% of Anglophones and 49% of Francophones never write a letter or other document of more than one page.

\*\* It should be noted here that 16% of Anglophones and 27% of Francophones never read books.

Source: IALS, 1994.

Furthermore, earlier data from the 1992 General Social Survey showed that 87% of Anglophones had read a daily newspaper in the week preceding the survey, as compared to 78% of Francophones. Among Anglophones, 66% had read a magazine during the same period, compared to 57% of Francophones. And lastly, the same survey showed that 46% of Anglophones had read a book during the week preceding the survey, compared to 44% of Francophones.<sup>14</sup>

When the distribution of data from the present survey is broken down according to the three provinces where the great majority of Francophones reside, it becomes evident that major disparities exist within the Francophone population with respect to participation in these activities. Ontario Francophones generally do better than their counterparts in Quebec and New Brunswick. As to comparisons between Anglophones

<sup>14</sup> The much larger gap between the two groups in the present survey may be due to the different wording of the question. Also, it may be that if respondents are asked whether they have read a book in the week preceding the survey, they will provide a more accurate estimate.

and Francophones, the gap is much narrower in Ontario than in New Brunswick as regards the reading of newspapers and books. However, the picture is less clear with respect to visiting a library or the amount of time spent watching TV. Ontario Francophones visit libraries more frequently than their New Brunswick counterparts, but the gap between the linguistic groups is smaller in the latter province, given the low level of library use by New Brunswick Anglophones. With regard to television viewing, there is little gap between the linguistic groups. However, while data are not available for Quebec, that province stands out sharply from the other two, with 53% of Francophones spending more than two hours per day in front of the tube. Lastly, it is noteworthy that Ontario Anglophones and Francophones alike assign considerable importance to setting aside time for their children to read. In Ontario, 53% of Francophones stated that such a period was set aside, while New Brunswick and Quebec posted proportions that were respectively 16 and 17 points lower.

Table 16

Percentage of Population Aged 16 and Over (New Brunswick, Quebec, Ontario) Engaging in Selected General Reading and Writing Activities, by Mother Tongue, 1994

	Mother tongue	
	English	French
.Reading newspapers daily		
New Brunswick	64	49
Quebec	...*	53
Ontario	69	62
.Visiting a library at least once a month <sup>15</sup>		
New Brunswick	16	13
Quebec	...	18
Ontario	31	22
.Writing a letter or another document of at least one page (at least once a month)		
New Brunswick	31	21
Quebec	...	26
Ontario	41	31
.Reading books (at least once a week) <sup>16</sup>		
New Brunswick	55	36
Quebec	...	38
Ontario	56	53
.Spending time each day watching television or videos (more than two hours a day)		
New Brunswick	42	41
Quebec	...	53
Ontario	38	42
.Time is set aside each day for children to read (percentage who agree with this statement)		
New Brunswick	48	37
Quebec	...	36
Ontario	50	53

\* The sample of Quebec Anglophones is too small for a valid estimate.

Source: IALS, 1994.

## Rural Versus Urban

We have seen that individuals' literacy levels varied considerably from one province or region of Canada to another. The IALS data also show that a major gap exists

<sup>15</sup> It should be noted here that 72% of New Brunswick Francophones and 67% of that province's Anglophones report that they never visit a library. In Ontario, 59% of Francophones make the same statement, compared to 42% of Anglophones. Probably this phenomenon is largely related to the lack of public libraries in respondents' vicinity.

<sup>16</sup> Also, 30% of New Brunswick Francophones state that they never read books, compared to 15% of Anglophones. In Ontario, 17% of both linguistic groups make this statement.

in these levels between individuals living in urban areas and those living in rural areas. The argument of a stronger concentration of Francophones than of Anglophones in rural areas was once used to explain the socio-economic disparities (in education, income and employment) between these two groups. However, judging from the results shown in Table 17, it seems clear that there are persistent disparities in literacy levels between Francophones and Anglophones living in the same type of area (rural or urban), although the type of area appears to play a fairly important role. In particular, on the prose scale, at the lower literacy level, there is a gap of 9 points between Francophones living in rural areas and those living in urban areas. There are similar gaps on the other scales. On the document scale, twice as many Francophones living in urban areas (16%) as those living in rural areas (8%) are at the highest level.

Table 17

Distribution of Canadian Population Aged 16 and Over by Literacy Skill Levels, by Place of Residence (Rural/Urban) and Mother Tongue, 1994

(Mother tongue)		Prose scale			
Place of residence		Level			
		1	2	3	4/5
(English)					
	Rural	18	24	34	24
	Urban	11	26	35	28
(French)					
	Rural	33	28	32	7
	Urban	24	26	40	10

(Mother tongue)		Document scale			
Place of residence		Level			
		1	2	3	4/5
(English)					
	Rural	20	27	29	23
	Urban	14	22	36	28
(French)					
	Rural	33	27	32	8
	Urban	28	27	29	16

(Mother tongue)		Quantitative scale			
Place of residence		Level			
		1	2	3	4/5
(English)					
	Rural	20	26	33	21
	Urban	13	23	38	27
(French)					
	Rural	28	35	31	7
	Urban	25	31	32	12

Source: IALS, 1994.

## Factors that Influence Literacy Levels

Throughout this study, we have examined one by one the different factors that influence the literacy levels of members of Canada's two main linguistic groups. We have thus seen that level of schooling is quite important, and that age, daily writing and reading habits, occupation type, etc. are also factors that significantly influence reading and text comprehension skills. The questions that arise now are, what is the relative effect or role of these different factors on literacy levels, and how significant is the effect of belonging to one or the other of the two linguistic groups once the other factors are taken into account? Tables 18 to 21 show the importance of these factors for the geographic regions identified.

If we look at Canada as a whole, Table 18 shows that if only mother tongue is taken into account, the major gap between the mean scores of the two linguistic groups on the prose scale is nearly 30 points, or approximately 10%. Thus, according to the first model, Francophones have a mean score of 259 compared to 289 ( $259.4 + 29.7$ ) for Anglophones. In the second model, when the number of years of schooling completed is held constant, the insertion of the latter variable reduces the gap between the mean scores of the two groups by 21 points ( $29.7 - 8.6$ ), a reduction of 71%. This suggests that while having English as one's mother tongue still has a significant influence, its relative importance is considerably smaller.<sup>17</sup> The third model includes 10 additional variables; in it, the influence of mother tongue on the mean score obtained is rendered insignificant. With this model, the gap between the mean scores of the two groups is thus reduced by 24 points, or 79%. The same model shows that in addition to the number of years of schooling completed, age continues to have a major effect on the literacy level obtained. Thus, being under 45 years of age adds nearly 19 points to individuals' mean score. At first glance, such a finding may seem surprising, given the close link between level of schooling and age. Although it cannot be proven, it may be hypothesized that if an individual is not (or has not been) exposed, for some time and on a regular basis, to written material of the type presented in the tests may, this may, over the years, diminish that individual's literacy skill level, even among those who have already obtained a

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<sup>17</sup> When the values of the standardized beta coefficients are compared, the relative importance of education on the mean score is ten times more important than language.

higher level of schooling. In addition to the age factor, Table 18 clearly shows the importance of regular reading habits in maintaining and developing skills. Model 3 shows that reading newspapers and books and visiting a library are closely linked to the mean score obtained. Obviously, the causal link between literacy levels and reading and writing habits is probably bi-directional, since a person may read more because of a skill level that is already above average, while on the other hand, regular reading habits are conducive to maintaining and improving literacy skills. Lastly, it is worth noting that belonging to specific occupational categories is also associated with obtaining a higher mean score. Thus, individuals who worked as professionals or were engaged in related occupations obtained higher mean scores, even controlling for the number of years of schooling completed. This link is quite probably due to the fact that the reading and writing of different types of texts account for a major part of these individuals' time at work. A similar link is observed for office employees. Holding a job in one of these two occupational categories translates into an increase of 20 points and 17 points respectively in these individuals' mean score.



Table 18

## Regression Models Showing Effects of Selected Variables on Mean Scores on Prose Scale, Adults Aged 16 and Over, Canada, 1994

	Model 1	Model 2	Model 3
	b	b	b
Constant	259.4	145.0	139.8
Mother tongue (French=0)	29.7 ***	8.6*	6.1
Years of schooling		10.5 ***	7.3 ***
Age (45 years and over = 0)			18.7 **
Sex (Female=0)			- 8.6
Index for daily use of written materials			6.5
Visiting a library (less than once a month=0)			9.3 *
Writing letters or other documents of more than one page (less than once a month=0)			2.3
Reading newspapers (less than once a week=0)			16.8 ***
Reading books (less than once a week=0)			10.5 **
Occupation (agriculture and related=0)			
Management/administration			8.2
Professionals and related			19.8 ***
Office work			8.6
Sales/services			17.0 *
Machine operators			9.1
Watching television (0=more than one hour a day)			5.7
Size of community of residence (0= rural / 1= urban)			- 3.3
<b>R<sup>2</sup></b>	0.05	0.43	0.51

Significance levels: \*\*\* = .001, \*\* = .01, \* = .05

Source: IALS, 1994.

As we have seen, the impact of these factors on the mean scores obtained clearly varies according to the province of reference. New Brunswick is an especially interesting case, since it exhibits the widest gap between Anglophones and Francophones. Tables 19 and 20 show that in that province, mother tongue explains 8% of the variance in mean scores on the prose scale, compared to 2% in Ontario. A glance at the first model in these two tables shows that the gap between the mean scores of Francophones and Anglophones is approximately 13% in the two provinces,<sup>18</sup> although Ontario Anglophones obtained a slightly higher score than their New Brunswick counterparts. In turn, Table 21 shows that when we consider only Quebec Francophones and Anglophones in Canada as a whole (designated below as the Quebec/Canada sample), the gap between the two groups is just under 10%.

It is interesting to note that the influence of the number of years of schooling differs greatly from one region to another. Model 2 shows that adding this variable to the equation reduces the gap in the mean scores of the two linguistic groups by only 5 points in New Brunswick (that is, by 14%), by slightly more than 17 points (or 47%) in Ontario and by 22 points (or 80%) in the Quebec/Canada sample. Furthermore, in the latter sample the importance of belonging to one linguistic group or the other ceases to have a significant influence on the mean score obtained (see Table 21).

A look at Model 3 in Table 19 shows that even when 11 major variables are added to the initial model, the gap between the mean scores of the two linguistic groups in New Brunswick is merely reduced by just under 11 points (that is, by only 29%) and that belonging to one of these two groups still plays a significant role in the mean score obtained. In short, this means that approximately 71% of the difference between the two groups still remains unexplained after these variables are inserted into the regression equation. For Ontario, the insertion of these variables into Model 3 reduces the gap in mean scores between the two groups by 21 points (a reduction of 57% compared to Model 1). In the case of the Quebec/Canada sample, the gap is reduced by nearly 25 points (89%). In the latter table, just as in the case of New Brunswick, a significant link is noted between regular reading and writing practices and the mean score obtained.

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<sup>18</sup> Namely,  $(37,4 / (244,1 + 37,4))$  compared to  $(37,2 / (254,2 + 37,2))$ .

However, in New Brunswick, writing practices appear to have a more significant influence than reading newspapers and books.

In Ontario, belonging to one or the other of the two linguistic groups ceases to exhibit a significant link with the mean score obtained. However, an examination of the data revealed that the size of the standard error was relatively high for some variables. Because of the nature and actual size of the sample for Ontario, the data should be interpreted with caution.

Table 19  
 Regression Models Showing Effects of Selected Variables on Mean Scores on Prose  
 Scale, Adults Aged 16 and Over, New Brunswick, 1994

	Model 1	Model 2	Model 3
	b	b	b
Constant	244.1	130.7	118.8
Mother tongue (French=0)	37.4***	32.1***	26.6***
Years of schooling		10.1 ***	5.8 ***
Age (45 years and over = 0)			20.9 **
Sex (Female=0)			- 2.7
Index for daily use of written materials			- 2.7
Visiting a library (less than once a month=0)			9.4
Writing letters or other documents of more than one page (less than once a month=0)			20.4***
Reading newspapers (less than once a week=0)			17.0
Reading books (less than once a week=0)			13.7
Occupation (agriculture and related=0)			
Management/administration			27.5
Professional and related			26.5
Office work			24.8 **
Sales/services			30.1 **
Machine operators			15.4
Watching television (0=more than one hour a day)			4.2
Size of community of residence (0=rural / 1= urban)			- 7.5
<b>R<sup>2</sup></b>	0.08	0.48	0.63

Significance levels: \*\*\* = .001. \*\* = .01. \* = .05

Source: IALS, 1994.

Table 20  
 Regression Models Showing Effects of Selected Variables on Mean Scores on Prose  
 Scale, Adults Aged 16 and Over, Ontario, 1994

	Model 1	Model 2	Model 3
	b	b	b
Constant	254.2	129.4	125.5
Mother tongue (French=0)	37.2 ***	19.8 *	16.0
Years of schooling		10.5 ***	7.0 **
Age (45 years and over = 0)			22.5
Sex (Female=0)			- 4.5
Index for daily use of written materials			7.9
Visiting a library (less than once a month=0)			10.4
Writing letters or other documents of more than one page (less than once a month=0)			1.6
Reading newspapers (less than once a week=0)			26.3 ***
Reading books (less than once a week=0)			14.1 *
Occupation (agriculture and related=0)			
Management/administration			-7.8
Professionals and related			22.1
Office work			5.7
Sales/services			8.7
Machine operators			-1.6
Watching television (0=more than one hour a day)			8.6
Size of community of residence (0=rural / 1= urban)			- 11.5
<b>R<sup>2</sup></b>	0.02	0.39	0.49

Significance levels: \*\*\* = .001. \*\* = .01. \* = .05

Source: IALS, 1994.

Table 21

Regression Models Showing Effects of Selected Variables on Mean Scores on Prose Scale, Population Aged 16 and Over, Canada Excluding Quebec, 1996

	Model 1	Model 2	Model 3
	b	b	b
Constant	261.5	147.5	143.1
Mother tongue (French=0)	27.6 ***	5.6	3.1
Years of schooling		10.5 ***	7.4 ***
Age (45 years and over = 0)			18.2 **
Sex (Female=0)			- 8.9
Index for daily use of written materials			6.9
Visiting a library (less than once a month=0)			9.5 *
Writing letters or other documents of more than one page (less than once a month=0)			1.6
Reading newspapers (less than once a week=0)			16.7 ***
Reading books (less than once a week=0)			10.5 **
Occupation (agriculture and related=0)			
Management/administration			7.5
Professionals and related			19.3 ***
Office work			7.1
Sales/services			17.4 *
Machine operators			8.1
Watching television (0=more than one hour a day)			5.6
Size of community of residence (0=rural / 1= urban)			- 4.6
<b>R<sup>2</sup></b>	0.04	0.42	0.51

Significance levels: \*\*\* = .001. \*\* = .01. \* = .05

Source: IALS, 1994.

## Conclusion

Like a number of earlier surveys, the 1994 IALS identified sizable differences in literacy levels between Francophones and Anglophones in Canada. Whether with respect to prose, document or quantitative literacy, Francophones did less well on the skill tests than Anglophones. Faced with this finding, we were able to use several variables from the 1994 survey in order to identify factors that could explain such disparities. For example, we showed the major importance of education in individuals' acquisition of literacy. Similarly, age, sex and daily reading and writing habits and behaviours proved to be important factors explaining the disparities between the linguistic groups. A number of observers have already stressed the importance of socio-historical, political and economic factors or conditions that have directly influenced the literacy level of Francophone populations in Canada. The importance of historical factors is especially clear when one looks at the substantial progress in education achieved by Francophones between 1971 and 1996. This progress is such that among the young, there is almost no gap in literacy test scores between the linguistic groups. However, it is necessary to examine and assess the extent to which the fact of living in a minority situation is likely to erode these skill levels among young Francophones.

The IALS data brought out an important reality that affects Francophones living in a minority situation in Canada. The analyses conducted on these data showed that when relevant variables from the survey were inserted into linear regression models, substantial differences appeared between Quebec Francophones (living in a majority situation) and Francophones outside Quebec (living in a minority situation). When the mean scores obtained by Quebec Francophones are compared with those of Anglophones in Canada as a whole, the gaps that exist between the two groups cease to be significant if one controls for the effect of key factors such as education, age, daily practices with respect to writing and numeracy, etc. In short, disparities exist between Quebec Francophones and Anglophones in Canada as a whole, but they can be explained almost entirely by the variables present in the IALS database. The situation is quite different with respect to New Brunswick Francophones. Even when all the variables that might explain the disparities between the two linguistic groups in that province are inserted into

the model, a substantial portion of the statistical gap remains. It is more difficult to draw a conclusion concerning Ontario, since, as noted above, the standard error for some of the variables used is relatively large.

Of course, there are other factors that may explain the disparities between Anglophones and Francophones in Canada. Those considered thus far, which the 1994 IALS made it possible to explore, are sufficiently important to provide food for thought on ways to improve literacy levels in Canada. However, in subsequent surveys, it will be necessary to give more consideration to other factors that may explain the specific literacy status of Francophones in a minority situation.



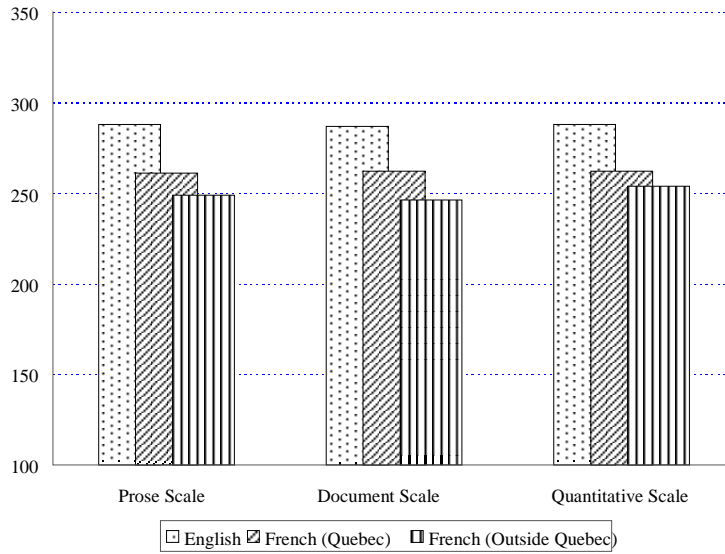
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## **Appendix**

Figure A1

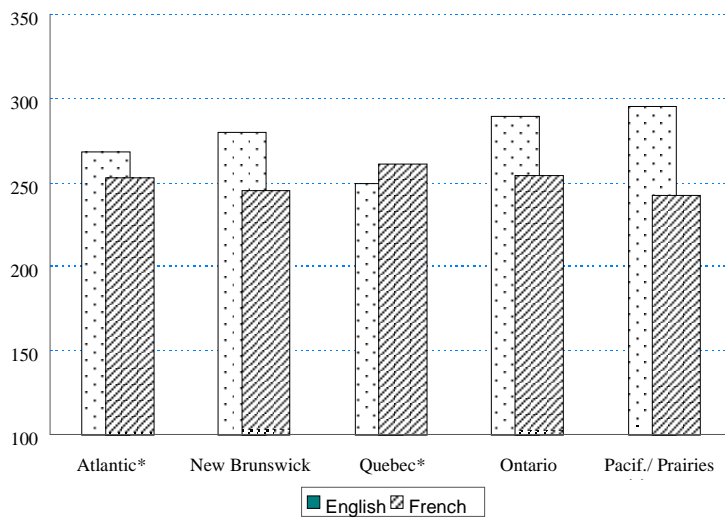
Mean Score by Mother Tongue  
Three Scales (Population aged 16 years and over),



Source: EIAA, 1994

Figure A2

Mean Score by province and Mother Tongue  
Document Scale (Population aged 16 and over)

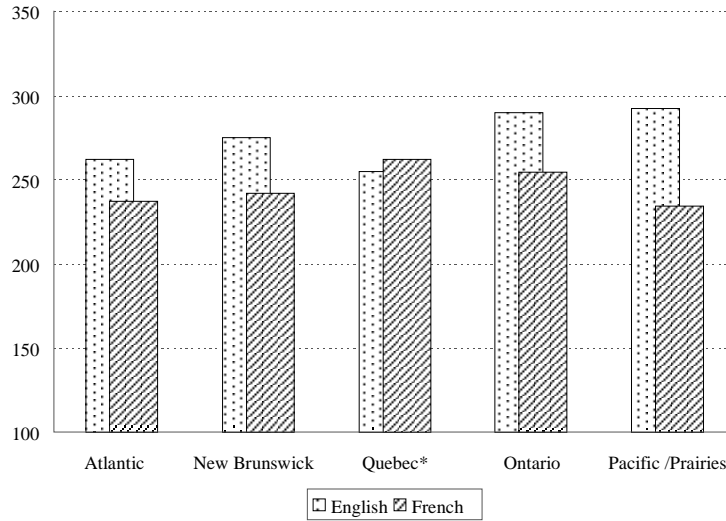


\* The difference between mean scores of Anglophones and Francophones not significant in Atlantic region nor in Quebec

Source: IALS, 1994.

Figure A3

Mean Score by Province and Mother Tongue  
Document Scale (Population aged 16 and over)

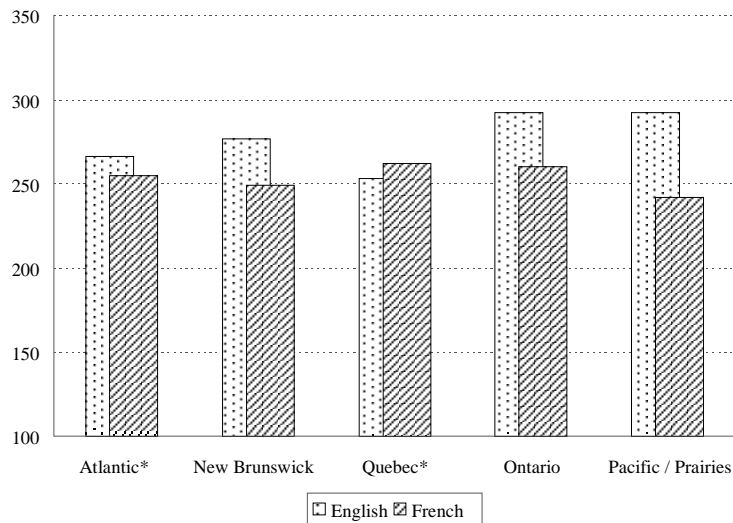


\* The difference in mean scores between Anglophones and Francophones is not significant in Quebec

Source: IALS, 1994.

Figure A4

Mean Score by Province and Mother Tongue  
Quantitative Scale (Population aged 16 and over)



\* The difference in mean scores between Anglophones and Francophones is not significant in the Atlantic region nor in Quebec

Source: IALS, 1994.