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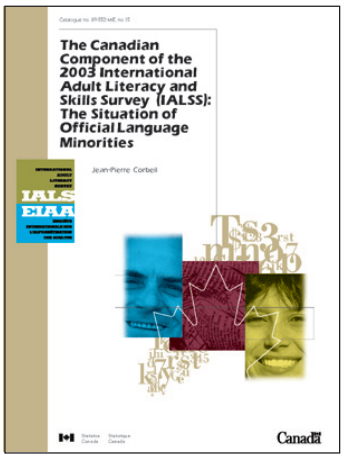
International Adult Literacy Survey

The Canadian Component of the 2003 International Adult Literacy and Skills Survey (IALSS): The Situation of Official Language Minorities



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Acronyms

ALSS - Adult Literacy and Skills Survey

CMA – Census Metropolitan Area

ECDO – Economic Co-operation and Development Organisation

IALLSS – International Adult Literacy and Life Skills Survey

IALS – International Adult Literacy Survey

HRDC – Human Resources Developement Canada

LSUDA - Survey of Literacy Skills Used in Daily Activities

UNESCO - United Nation Educational, Scientific and Cultural Organization

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Introduction

Considering the importance of literacy and the skills that individuals require in a knowledge and information economy, it is clear that the vitality of official language minorities largely depends on them having the tools and information that they need in order to grow and develop. Because of the unfavourable situation in which many Francophones find themselves with respect to their reading, writing and numeracy skills, these communities must have data enabling them to better understand the situation of their members so that they can target their efforts more effectively. It was in this spirit and in light of the above that this study was prepared, focusing on the literacy and skills of official language minorities as measured in the 2003 Adult Literacy and Life Skills Survey (ALL). This study seeks to shed light on different aspects of the processes by which official language minorities acquire literacy and language mastery.

The main national objective of the ALL survey is to produce estimates of the change in the literacy level of Canada's adult population since the publication of data from the 1994 International Adult Literacy Survey (IALS). In Canada, the IALS was an innovative survey conducted on an experimental basis, as seen in the limited size of the sample for Canada (5,660 respondents). That sample was not sufficient to yield reliable estimates for most provinces. The size of the ALL sample (23,038 respondents) was designed to correct this situation by providing enough cases to establish statistically reliable literacy profiles for all provinces. Using the variables in the basic questionnaire, it is also possible to carry out a detailed analysis of the main causes and consequences of the skill profiles observed and to identify the populations most at risk owing to their low literacy levels.[1]

In the 1994 survey, the number of persons sampled was insufficient to develop expert analyses focusing on official language minority communities. The detailed study entitled *Reading the Future: A Portrait of Literacy in Canada* (HRDC and Statistics Canada, 1996), which presented the results of the Canadian component of the 1994 survey, was not able to examine the literacy status of official language minorities in depth, largely because of the limitations of the sample.

However, at the national level, some studies have gathered information on the distribution of reading abilities among adults in Canada according to their linguistic profile. The following findings have emerged:

- there are marked differences in literacy levels between Anglophones and Francophones;
- the younger the cohorts studied, the smaller these differences tend to be;
- these differences are almost non-existent when comparing individuals with similar education levels;
- education level, and not language, is largely responsible for the differences observed in the scores attained in literacy tests;
- individuals who have practise their literacy skills, both at work and in life in general, tend to maintain higher literacy levels.

While limited by the size of the samples and the non-existence of reliable data for some official language minorities (e.g., Quebec Anglophones), it was nevertheless possible to develop analyses and statistical models based on the 1994 survey. For example, it was shown that schooling plays a major role in individuals' acquisition of literacy. As well, age, gender, daily reading and writing habits and behaviours (which themselves are highly correlated with level of schooling) proved to be important factors for explaining disparities between the language groups. A number of observers have already stressed the importance of socio-historical, political and economic factors or conditions that have had a direct impact on the literacy level of Francophone populations in Canada. The importance of historical factors stands out clearly when one examines the major educational progress achieved by Francophones between 1971 and 2001. So great is this progress that among the young, the gaps between language groups in literacy tests are almost non-existent. However, we need to be able to examine and assess the extent to which living in a minority situation is likely to lead to the erosion of literacy skills, especially in French, among young people.

Among the objectives of this study, there is a need to

- examine the literacy levels in French of Francophones living outside Quebec who chose to take the tests in English compared to those who took them in French;
- analyse the effects of the language in which respondents read and write at home and at work, the language in which they watch television, etc.;
- determine the literacy status of Quebec Anglophones and compare it to that of Anglophones in the other provinces and that of other minority groups;
- determine the factors that contribute to the success and development of some groups living in a linguistic minority situation.

1. Background

Literacy and education are major social, economic and political issues. In Canada, this may be seen most concretely in the sizable amounts invested in adult education, postsecondary education and efforts to reduce the dropout rate. The importance of these issues also has to do with the fact that as Wagner (2002) and Hautecoeur (1996) observe, the literacy problems experienced by many Canadians are generally related to poverty, exclusion, low self-esteem and difficulties in social, political and economic integration. It is also worth noting that in its speech from the Throne in 1999, the federal government cited the need to

> forge partnerships with other governments, public- and private-sector organizations, and Canadian men and women to establish a national action plan on skills and learning for the 21st century. This plan will focus on lifelong learning [and] address the challenge of poor literacy among adults….

Also, in 2004, the Throne Speech of the New Brunswick government explicitly stated the government's intention to continue to stress both early literacy and adult literacy.

In order to implement programs to combat illiteracy and the structural conditions that produce and maintain low literacy levels in the population, it is necessary to be able to measure the scope of the phenomenon. As Boucher (1989) and Wagner (2002) point out, the measurement of the phenomenon, by UNESCO in particular, has long been based on the use of statistics on years of schooling. Furthermore, it was common practice to distinguish "illiterate" persons in the population from "literate" ones. Thus, persons with less than grade 9 were considered illiterate. This population was then divided into two sub-populations: those who had completed less than five years of schooling —considered *completely illiterate*—and those who had completed five to eight years of school, considered *functionally illiterate*. Under these criteria, in 2001 there were more than 524,000 complete illiterates within the population aged 15 or over in Canada (3%) and more than 1,825,000 functional illiterates (8%).

Even though the level of schooling provides an indication of an individual's current or past exposure to the written word, it is not a precise indicator of the current level of reading, writing, numeracy or problem-solving skills in the context of daily life. Since literacy is a process which, starting in childhood, extends over the entire life of an individual, it cannot be assumed that individuals' level of skill with respect to the written word will not vary either upward or downward over the course of their life.

It was therefore necessary to rethink the use of the schooling criterion so as to be able to measure the current level of skills that are subject to continual change. For this reason, during the 1980s, first in the United States and then in Canada and thereafter in many other industrialized countries, there was a growing interest in developing measurement instruments better designed to determine the scope of the literacy phenomenon. There was, then, a shift away from measuring illiteracy toward measuring literacy.

The concept of literacy encompasses the notion of "proficiency"; it thus entails the ability to understand and use "printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential." (OECD and Statistics Canada, 1995: 14) According to the *Termium*® database, it implies the ability to process increasingly sophisticated written information for purposes that go beyond mere communication. Thus, as Wagner (2002: 13) notes, "an important characteristic of this definition [of literacy] is that instead of treating reading and writing skills as generic or disembodied concepts, it relates them to the linguistic, cultural, economic and social contexts in which people live." Furthermore, the relatively recent use of the term "literacy" in this sense arises primarily from the fact that in our modern societies, where technology and science are constantly evolving, the mere fact of being able to read and write is no longer an adequate indicator of one's ability to process information in one's daily life. This is why the concept of literacy now emphasizes individuals' daily application of their skills within society—more especially their abilities to process written information, be it in the form or numbers or words.

1.1 Literacy and language

The ability to understand and interpret the written word is closely linked to a number of social, linguistic, cultural and economic parameters. As a result, any attempt to examine the literacy situation of the language groups in Canada must, as Wagner (2002: 14) rightly points out, take account of the socio-historical, political and economic conditions in which these linguistic communities have evolved. These conditions have greatly influenced the development of their literacy level.

1.2 A few historical factors

A historical overview of official language minorities' situation with respect to schooling reveals some major contrasts, firstly between Francophones outside Quebec and Anglophones in Quebec and secondly between the Francophones of the different provinces. Furthermore, as noted by Wagner (2002), among Francophones, it is important to distinguish the situation of literacy *in French* from that of the literacy *of persons whose mother tongue is French*.Martel (1991: 54) identifies three major events which in varying degrees shaped the evolution of instruction in French outside Quebec[2]:

1. withdrawal of rights, sometimes including prohibition of French-language instruction, followed by gradual recognition of the education rights of the Francophone minorities;
2. consolidation of school districts, entailing loss of the local control which Francophone communities had established, followed by establishment of new management models to accommodate the Francophone minorities;
3. partial or complete substitution of programs of instruction in the mother tongue designed for the minority by French-as-a-second-language immersion programs designed for the majority, followed by official differentiation between these programs.

After Confederation in 1867, education became a field of exclusively provincial jurisdiction and accordingly, each province attempted to implement a uniform education system throughout its territory. Except in Quebec, this resulted in non-recognition of linguistic duality and the imposition of English as the only language of instruction. As noted by Martel (1991: 55), "[a] considerable volume of legislation blatantly restricted, repealed or prohibited in whole or in part provisions which had previously permitted instruction in French…." In Quebec, because of the dominant social status of the Anglophone community, its members had the benefit of educational resources and institutions that assured them a much higher enrolment rate than that of the Francophone majority.

Despite the fact that at the start of the last century, Francophone minorities gradually began to organize to ensure that their members could receive en education in their language and the provinces gradually amended their legislation to allow instruction in French, it was really only in the 1960s—especially in New Brunswick, Ontario and Manitoba—that the situation changed and thinking evolved markedly. A catalyst in this regard was the official recognition of Canada's linguistic duality, notably as a result of the Royal Commission on Bilingualism and Biculturalism (hereinafter called the Laurendeau-Dunton Commission) and the enactment of the *Official Languages Act* in 1969.

During the 1970s, following the election of the Trudeau government in 1968, the issue of the educational rights of official language minorities became a central issue in intergovernmental negotiations. With the patriation of the Constitution and the creation of the *Canadian Charter of Rights and Freedoms* in 1982, Francophone minorities outside Quebec were officially recognized, in section 23 of the Charter, as having the right to education in their language. However, despite this official recognition, Francophone communities were faced with major problems insofar as the management of French schools lay outside their control, notably because of various school reorganizations that caused the schools of Francophone minorities to be integrated into the structures of the Anglophone majority.

Both the right of Francophones to an education in French and the right to manage their schools were inhibited by the introduction of French immersion programs for Anglophones in the 1970s. Paradoxically, as Martel (1991: 56-57) points out,

> [T]he establishment of these programs designed for the Anglophone majority inhibited the development of education in French designed for the Francophone minority. In most provinces and territories, the two activities were partly or completely amalgamated, from program design to management by the ministry of education.

Outside Quebec and New Brunswick, it would thus be necessary to wait until the 1990s before the right of Francophones to manage their own educational programs would be officially recognized.

1.2.1 Four provinces: four unique situations[3]

New Brunswick

New Brunswick stands out sharply from the other provinces apart from Quebec, notably because of Francophones' weight within its population. When it joined Confederation in 1867, instruction in French was widespread but had no official recognition. Four years later, in 1871, the *Common Schools Act* provided for public education to become nondenominational and free. However, as Martel observes (p. 146), "All subjects are taught using English textbooks, but French reading and grammar are taught in the Acadian schools." In response to the fact that Francophones were not allowed to teach religion during the school day, Francophones established a system of private schools. Nearly seventy years later, in 1944, the government appointed a Francophone assistant to aid the chief superintendent of schools, and in 1964, two deputy ministers were appointed in the Ministry of Education: a Francophone and an Anglophone.

Re-elected in 1967, the Liberal Party headed by Robichaud enacted the *Official Languages Act* of New Brunswick in 1969. As noted by Behiels (2005: 19), this Act "made English and French the two official languages of the province, guaranteed bilingualism in the Legislative Assembly, and called upon the government to institute bilingualism throughout the province, beginning with education, the public service, and the justice system." In 1977, new provisions of the *Official Languages Act* came into force, providing for French mother tongue pupils to be taught in French and English mother tongue pupils to be taught in English (Martel, 1991: 147). Two

years later, the *Report of the Committee on the Organization and Boundaries of School Districts in New Brunswick* was made public. It recommended that schools be organized on the basis of the first language and that school districts be established along linguistic lines. In 1981, minority school boards were created and Francophones now had full management of their homogeneous schools. New Brunswick's Acadians therefore did not have to wait for section 23 of the Charter to win full school governance and a separate education branch within the ministry (Behiels, 2005: 20).

Furthermore, on July 17, 1981, the Legislative Assembly unanimously passed Bill 88, an *Act Recognizing the Equality of the Two Official Linguistic Communities in New Brunswick*. In 1983 a judgment of the Court of Queen's Bench ruled that bilingual schools were centres of assimilation and that immersion was intended for Anglophones and not for the Francophone minority.

However, all was not rosy for Francophones. Behiels (2005: 19) notes that the situation was grim for Acadians left behind in their resource-based communities in the northeast and northwest regions of New Brunswick, to say nothing of the myriad problems confronting undereducated urbanized Acadians.

Ontario

In 1889, a regulation incorporated into the *Public School Act* established the exclusive use of English as the language of instruction unless the pupil did not understand English. This exception became an incentive for creating "bilingual" schools in regions where the concentration of Francophones was high (Martel, 1991: 123). In 1912, the Merchant Commission recommended the gradual transition from French to English as language of instruction in bilingual schools (referred to as English-French schools) for Francophones. And in 1913, Regulation 17 made English the only language after grades 1 and 2. For subsequent grades, French was permitted for a maximum of one hour a day. In 1927, Francophone students were allowed instruction in their mother tongue but it was necessary to know English by the end of grade 8. The law was not changed until 1944. Twenty years later, in 1966, instruction in French was permitted for Latin, history and geography.

As noted by Behiels (2005: 90-91), "[i]n 1968, the Ontario government under Premier John Robarts was convinced that greater equality of educational opportunity for Franco-Ontarians was needed, especially at the secondary level. Via Bills 140 and 141, it amended the Education Act, the Schools Administration Act and the Secondary Schools and Boards Act to recognize the right of Franco-Ontarian children to an education in their own language; to authorize the Ministry of Education to create French language and bilingual primary and secondary classes and schools within the public system, and to establish consultative bodies…." Bills 141 and 140 thus authorized instruction in French in all subjects and at all levels.

According to Behiels (p. 91), "Robarts wanted to increase the participation rate of Franco-Ontarian children in secondary education and to see to it that, by the time they graduated, they were fluently bilingual and able to compete effectively with their English-speaking compatriots in the labour market." In 1969, the 1,358 school boards were reorganized into 192 administrative units. In a number of areas, Francophones lost the management of their schools, which had allowed them a structure of small local units. In 1979, acting on its Green Book that came out in February of that year, the government proposed, for the first time in an official document, the creation of linguistic "sections" within school boards.

In 1984, the Ontario Court of Appeal rendered a judgment according to which Ontario Francophones were entitled to (1) receive educational services equal in quality to those of the Anglophone majority, and (2) attend schools that reflected the culture of the minority. The judgment confirmed Franco-Ontarians right to govern their own schools.

Manitoba

Manitoba became a Canadian province in 1870, and the *Manitoba Act* guaranteed religious minorities' rights to their schools and the management of those schools. Nearly twenty years later, with the *Public Schools Act*, the Manitoba government eliminated the system of separate schools (Catholic or Protestant) and thus enshrined unilingualism in the education system. French-speaking Catholics lost the management of their independent schools, which became the property of the State. Instruction in French, along with the teaching of French and religion, were prohibited.

In 1896, the creation of bilingual schools was permitted if ten students in a school had French or another language other than English as their mother tongue. Twenty years later, in 1916, the government abolished the Act permitting bilingual instruction. Nevertheless, instruction in French continued.

In 1952, the *Public Schools Act* stipulated that English was the language of instruction, but that a language other than English could be used for religion courses and language courses given before or after the regular schedule of the school day. Three years later, in 1955, courses teaching French as a mother tongue were authorized from grades 4 to 12 and in 1963, they were authorized starting in grade 1.In 1967, the *Public Schools Act* was amended to permit, at the Minister's sole discretion, instruction in French to a maximum of 50% of the school day. A French section was set up within the Ministry of Education to develop policies, meet pedagogical needs and prepare programs in French. According to Behiels (2005: 200), "[m]any Franco-Manitobans were dissatisfied with the mixed or bilingual schools, seeing them as institutions of assimilation because their administrative and cultural environment remained predominantly English. Acting on a 1969 study by Roger Frechette, which indicated that a third of Franco-Manitoban students no longer understood or spoke French, in 1970 the NDP government passed Bill 113 modifying the *Public Schools Act*." Thus, with this bill, French and English were declared to be languages of instruction. French became a language of instruction up to a maximum of 100% of the school day from kindergarten to grade 3 and up to 75% of the school day from grade 4 through grade 12 (Martel, 1991: 115).

But in 1971 an order in council of the Manitoba government required elementary districts to join a new system of combined divisions responsible for both elementary and secondary education. In some situations, Francophones lost control of their schools or often had to share their school with an Anglophone minority.

In 1980, when the *Public Schools Act* was overhauled, the province reiterated the right to choose instruction in French but did not guarantee homogeneous schools or school governance by Francophones. In 1984, Franco-Manitoban schools and their special mission were recognized in a policy on the education programs of the Bureau de l'éducation française, founded in 1974.

According to Behiels, between 1979 and 1985, the complex system that was in place—which included rural and urban schools, public and separate schools, French-language, French immersion and bilingual schools—seemed to meet the immediate needs of most Franco-Manitoban parents and their children, but such a system could not eliminate anglicization. In 1990, the Court of Appeal rendered its advisory opinion concerning the interpretation of section 23 of the *Canadian Charter of Rights and Freedoms*: the five justices found that this section did not grant the right to school governance. However, the majority of the justices felt that the existing system did not respect the rights conferred by section 23. In 1993, decisions were rendered by the Supreme Court regarding the situations in Alberta and Manitoba. Those decisions were favourable to Francophones and granted them the management of French schools.

Quebec

Well before Confederation in 1867, Quebec's English-speaking community was headed by a powerful and quite influential elite (Rudin, 1985: 223). Soon after Quebec's entry into Confederation, the first *Public Instruction Act*, enacted in 1869, clearly distinguished the Catholic and Protestant sectors and recognized their autonomy by creating two provincial denominational boards. Six years later, the Ministry of Public Instruction was abolished and the Council of Public Instruction became the central authority.

By the first decade following Confederation, an agreement existed between the French Catholic and English Protestant elites. According to Rudin (1985: 245), on the one hand, the Francophone Catholic clergy maintained its ability to transmit certain cultural values without the intrusion of politicians. On the other hand, the Anglophone Protestant elite assured itself that its wealth would be employed for Protestant education without the State intervening to distribute resources more equitably. The support in favour of such an arrangement was so widespread that the State did not take control of education until a few years after the Jean Lesage Liberals came to power in 1960.

From 1875 to 1964—the year of the creation of the Quebec Department of Education—the Quebec system of denominational schools was thus run by two different denominational committees, with each responsible for its respective education system. Thus, for educational purposes, Quebecers, regardless of their mother tongue, were divided between Catholics and Protestants (Rudin, 1985).

During this period, the quality and full autonomy of the Protestant school system were assured owing to the economic strength of its members. Residential, commercial and industrial property taxes levied by Protestant school boards then served entirely to finance Protestant schools and gave the Protestant school sector—especially in the Montreal area—a superior status within the Quebec education system (Rudin, 1985, Martel, 1991).

During the twentieth century, the Quebec education system faced special difficulties in that it had to accommodate the various religious and language groups that immigrated to Quebec. Since a number of these groups integrated into the English-speaking community, the problems faced by the Quebec education system were to reflect the changes occurring in the composition of Quebec's English-speaking population.

However, with the arrival of non-French-speaking Catholic immigrants, Francophone Catholic leaders encouraged the creation of a semi-autonomous Anglophone sector within the Catholic School Commission of Montreal. Furthermore, the structure of the Montreal economy encouraged immigrants to demand an English education for their children (Rudin, p.233). However, they lacked the economic resources of their counterparts in the Protestant sector. At the start of the twentieth century, according to historian Terry Copp (1974), all working-class Catholics, regardless of their language, had inadequate and deficient resources and equipment. In Copp's view, the real problem for Catholic education at that time was its very marked division according to criteria of social class (Rudin, p. 231).

In 1963, the Dunton-Laurendeau Commission was created. The third volume of the Commission's report, published in the late 1960s, stated that both socially and economically, Francophones were greatly disadvantaged in relation to Anglophones in the employment sector. Markedly and consistently, Francophones were disadvantaged with respect to average income, education level, occupation scales and ownership of industries.

In Quebec, the improvement in the condition of Francophones was achieved notably through the creation of a number of working committees and commissions of inquiry designed to respond to the many needs of a society lagging well behind in making education accessible to all.

It was undoubtedly the Royal Commission of Inquiry on Education in the Province of Quebec, better known as the Parent Commission, that had the greatest influence on the future of the Quebec education system. The main objective of the Commission was "to create a free and accessible public education system that favours the education of anyone with the will and the abilities required to pursue higher education [translation]."[4]

The year 1964 thus saw the creation of a Department of Education that provided state support for and implementation of the recommendations of the Parent Report. Democratizing the Quebec education system during the 1960s and making education accessible to all, at both the secondary and the post-secondary levels, required sizable amounts to finance the new infrastructures, completely overhaul education structures and programs and train teachers.[5]

Whereas in 1969, one section of *Bill 63* gave parents the right to choose the language of instruction of their children, in 1974, *Bill 22* made French the official language of Quebec and enrolment in English schools was restricted to children who already had sufficient knowledge of that language. In 1977, the *Charter of the French Language* or *Bill 101* restricted enrolment in English schools to children whose parents had received most of their elementary education in that language in Quebec or whose brother or sister had been educated in that language. In 1984, that component of Bill 101 was deemed unconstitutional by the Supreme Court of Canada because it contravened section 23 of the Charter adopted in 1982 on the right to education in the language of the minority in that it did not allow Anglophone parents who had received their elementary education in English outside Quebec to send their children to an English school in Quebec.

Finally, during the same year, *Bill* 3 provided that for school purposes, Quebec's territory was to be reorganized on the basis of Anglophone and Francophone boards rather than denominational sectors. This then, was the end of school boards based on religion. However, the following year, 1985, this bill was deemed unconstitutional by the Quebec Superior Court, since it contravened the provisions of section 93 of the *British North America Act* of 1867. In 1988, the Quebec National Assembly passed *Bill 107*, which confirmed the division of Quebec's territory into Anglophone and Francophone school boards but protected the denominational boards that existed in 1867.

2. Literacy of official language minorities

As may be seen from the brief historical overview presented here, the literacy situation of official language minorities varies greatly, in particular depending on whether or not one is an Anglophone. However, unlike what might be believed, the situation of Quebec Anglophones is not homogeneous. Thus, not only are there disparities in this regard between Anglophones in various municipalities in the Montreal CMA, but also between Anglophones in the different regions of Quebec. The IALSS sample is not large enough to distinguish between the Anglophone populations of the various regions of Quebec. Statistics from the 2001 Census on the highest level of schooling, shown in Table 1, clearly show that real disparities exist among the regions. For example, while 6% of persons with English as their mother tongue in the Montreal CMA have less than grade 9, this is the case with 26% of those residing in eastern Quebec (Gaspé peninsula, Basse Côte-nord), a region made up of small rural or semi-rural municipalities with an older population.

Table 1

Proportion of Quebec Anglophones with less than 9 years of schooling and proportion with a university degree, by region, 2001

Region	Less than 9 years of schooling	University degree
Montreal CMA	6.2	23.2
Eastern Quebec	25.6	6.1
Outaouais/Pontiac/Abitibi	10.0	15.3
Estrie	13.7	10.1
Saguenay	7.8	22.7

Source: 2001 Census.

However, it is clear that overall, the situation of Quebec Anglophones differs greatly from that of both Quebec Francophones and Francophones living in a minority situation. According to data from the 1971 and 2001 censuses, shown in Table 2, nearly 40 years after the Dunton-Laurendeau Commission and despite notable improvements in the education level of the population, sizable gaps persist between Canada's language groups, especially in the older cohorts.

It is first worth noting that among persons aged 15 and over, there was – mainly because of changes making education compulsory to age 16 – a marked improvement in the proportion of persons with less than grade 9. Both in Canada as a whole and each of the provinces, this improvement was substantial between 1971 and 2001. In Canada, whereas 44% of Francophones had less than grade 9 in 1971, this proportion had fallen to 15% thirty years later. The situation was also much improved for Anglophones and allophones.[6] Among the latter, 50% had less than grade 9 in 1971, compared to 17% in 2001. The situation in 2001 still favoured Anglophones, since only 5% of them had less than grade 9 compared to 15% and 17% for Francophones and

allophones respectively. Another point to note is that Francophones in Prince Edward Island (23%) and those in New Brunswick (22%) are, among all Francophones in Canada, those with the highest proportion with less than grade 9.

Table 2

Population aged 15 and over with less than 9 years of schooling and with a university degree, by mother tongue, Canada, provinces and territories, 1971 and 2001

	Less than 9 years of schooling			University degree		
	French	English	Other	French	English	Other
Canada						
1971	44	23	50	4	5	4
2001	15	5	17	13	15	20
Newfoundland						
1971	43	45	41	4	2	16
2001	14	15	18	17	9	31
Prince Edward Island						
1971	61	35	43	2	3	11
2001	23	10	9	10	11	17
Nova Scotia						
1971	50	31	40	3	4	10
2001	17	9	10	13	14	27
New Brunswick						
1971	56	34	42	3	4	11
2001	22	9	11	10	12	25
Quebec						
1971	43	24	51	4	9	7
2001	15	8	21	13	20	20
Ontario						
1971	42	22	49	3	6	5
2001	12	5	17	15	16	22
Manitoba						
1971	41	22	53	3	5	3
2001	14	5	25	12	14	12
Saskatchewan						
1971	44	26	61	3	4	2
2001	16	7	31	12	11	10
Alberta						
1971	34	17	47	4	6	4
2001	8	3	17	15	14	18
British Columbia						
1971	36	18	44	3	5	4
2001	9	3	13	16	15	20
Yukon						
1971	28	19	46	5	4	3
2001	F	4	12	24	15	18
Northwest Territories[1]						
1971	35	20	81	5	6	1
2001	7	7	33	21	17	4

F too unreliable to be published

1. Including Nunavut.

Source: 1971 and 2001 censuses.

Along with the sizable decrease in the proportion of low-educated persons in the population between 1971 and 2001, strong growth was observed in the proportion of persons holding a university degree. It was among allophones that the strongest growth in university graduates was observed, with their proportion rising from 4% in 1971 to 20% in 2001. In Canada as a whole, whereas in 1971 the proportions of Francophones and Anglophones with a university degree were similar to that of allophones, in 2001 respectively 13% and 15% of them had such a degree. The stronger increase in university graduates within the allophone population reflects changes in Canada's immigrant selection criteria between the two censuses. Outside the provinces of Newfoundland and Quebec and the Yukon and Northwest Territories, there was little difference between Anglophones and Francophones in the proportions of university graduates. Quebec Anglophones stood out sharply from Anglophones in the other provinces, since 20% of them had a university degree, compared to 15% of Anglophones in Canada as a whole.

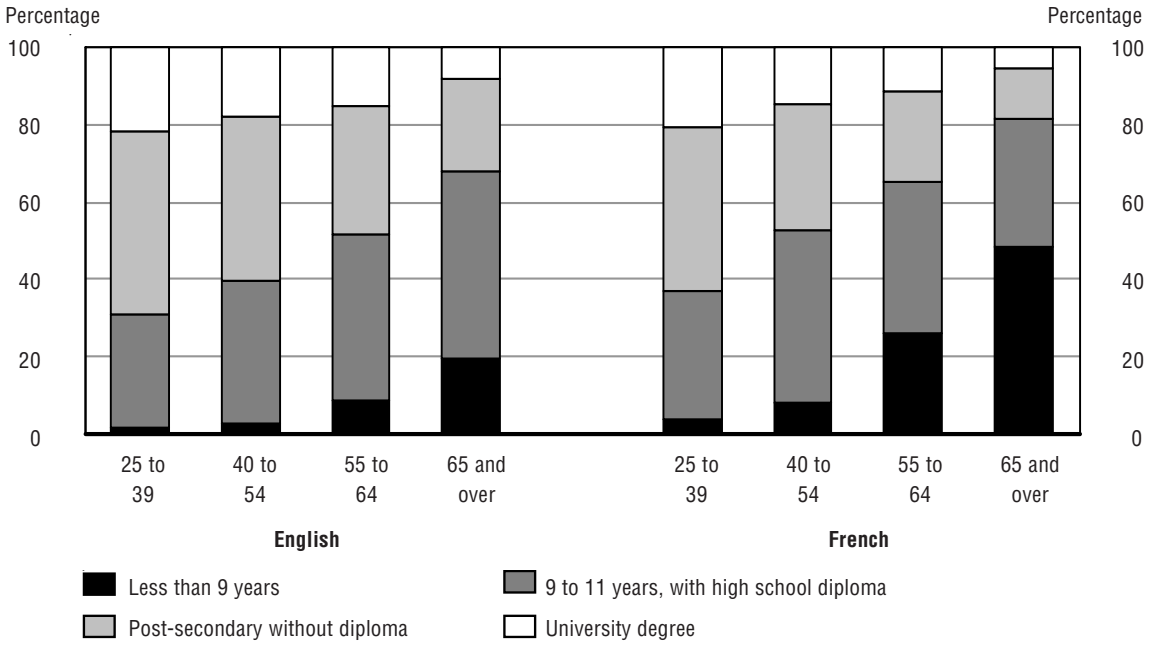
The differences in education level between Anglophones and Francophones are basically the result of historical factors that are tending gradually to diminish over time. Numerous studies have shown that the major educational progress made by Francophones in relation to Anglophones is mainly due to the higher attendance of younger cohorts and the greater tendency to attend post-secondary institutions.

Statistics on highest level of schooling from the 2001 Census clearly show the gaps between different age groups among Francophones and Anglophones (see charts 1a, 1b and 1c). As may be seen, the gaps between the two language groups are relatively small for persons aged 25 to 39, whereas they are much larger for persons 65 and over. Thus, whereas 70% of Anglophones aged 25 to 39 (both in Quebec and outside that province) have post-secondary education (with or without a diploma), for Francophones the proportions vary between 63% in Quebec and 69% for young Francophones as a group outside that province. It is worth noting that with respect to having a university degree, Anglo Quebecers in this age group stand out from their counterparts in other provinces: 29% of the former group have a university degree compared to 21% of other Canadian Anglophones. As expected, among persons aged 65 and over, the statistics on persons with less than grade 9 reveal major differences between the two language groups. Thus, in Quebec, nearly 25% of Anglophones in this age group have less than grade 9 compared to 49% of Francophones. Outside Quebec, the corresponding proportions are 20% and 46% for Anglophones and Francophones respectively.

Not only have younger cohorts generally received more education than older cohorts, but they have also been exposed to societal values that place greater emphasis than in the past on education and the benefits that may flow from acquiring a variety of cognitive skills. The younger cohorts also have the benefit of more recent education. But the knowledge acquired in recent schooling does not necessarily guarantee that skills will be maintained if this knowledge is not reinforced or if the skills acquired are not used in daily practices related to the written word.

Chart 1a

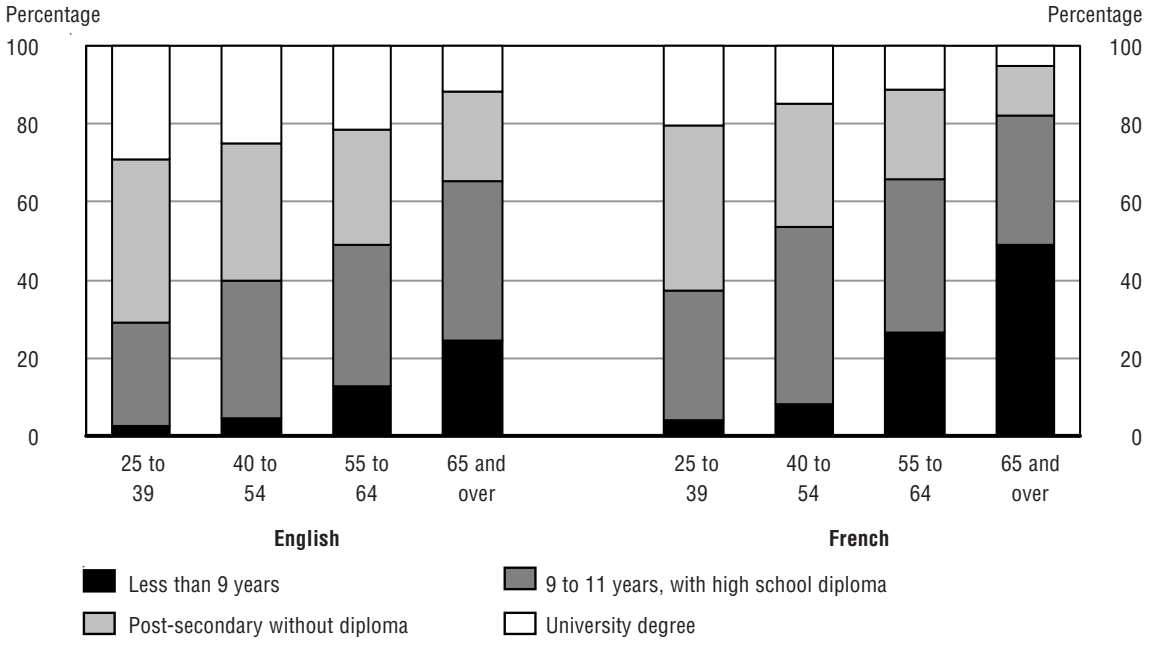
Highest level of schooling by age group and mother tongue, Canada, 2001



Source: 2001 Census.

Chart 1b

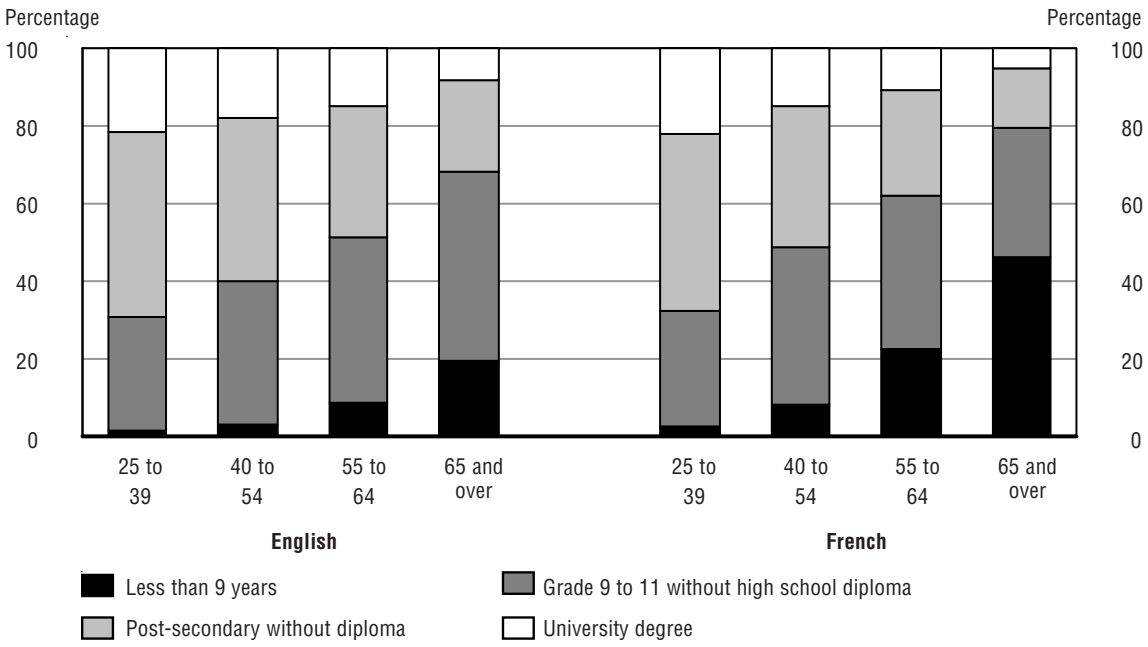
Highest level of schooling by age group and mother tongue, Quebec, 2001



Source: 2001 Census.

Chart 1c

Highest level of schooling by age group and mother tongue, Canada excluding Quebec, 2001



Source: 2001 Census.

2.1 Literacy of Francophones in a minority situation

At first glance, the issues facing Francophones in a minority situation are not so different from those facing members of other language groups. For all Canadians, literacy is an important factor in socioeconomic integration and full participation in a democratic society, and it is an important tool for both personal and cultural growth and enrichment. At the same time, however, the issues facing members of Francophone minority communities are specific to them in that literacy *in French* is, in the words of Wagner (2002: 14) "a strategic factor in the transmission of French language and culture from one generation to the next and in the integration of new Canadians."

In introducing his analysis of the data from the 1994 IALS, Wagner (2002) presents three types of literacy issues for Francophones: social integration, cultural and identity issues and occupational and economic advancement. In light of the importance of each of these types of issues for an understanding of our subject, we summarize below the nature and scope of each.

Social integration

In a technologically advanced society, literacy is obviously not a panacea for the problems faced by individuals in integrating into the social, cultural, economic and democratic life of a society. It can nevertheless play the role of a bulwark against social and economic marginalization and exclusion. Persons with low literacy skills are often disadvantaged in carrying out their daily activities (Boucher, 1989). Furthermore, their access to the labour market is generally limited. When they do find employment, the jobs they obtain are often precarious, poorly paid and performed in difficult working conditions. Many studies have also shown that persons with a low literacy level also find it difficult if not impossible to obtain positions requiring greater use of reading and writing skills. Consequently, it is especially difficult for them to be able to benefit from a job training program enabling them to acquire knowledge requiring reading and writing. Less literate persons are also

less likely than other persons to participate in the democratic life of their community and thereby assert their rights.[7] Finally, it should be noted that since the development of literacy is a process that begins in childhood and continues throughout an individual's life, less literate parents are also much more likely to have difficulty transmitting reading, writing, numeracy and problem-solving skills to their children.

Cultural and identity issues

In addition to serving as a bulwark against social exclusion in our modern societies, literacy is also essential in order for citizens to share in the cultural and linguistic capital of their community. Wagner (2002:15) states that being literate "is not just a matter of being proficient in the written language; it also means being fluent in the spoken language and, in particular, having the underlying cultural background. Literacy is a tool for mastering a culture's symbolic universe." While transmission of the linguistic and cultural capital of a community generally begins within the family, school remains a key environment for learning and developing reading, writing, numeracy and problem-solving skills. And as noted above, Francophones have historically been much less educated than Anglophones, and despite the fact that they have narrowed the gap in this regard, the weight of history still affects the current situation of many Francophones. Furthermore, we have shown that access to French schools is a recent reality for many Francophones in a minority situation. Many Francophones today received much or even all of their elementary or secondary education in English. Some Francophones had not necessarily mastered their mother tongue when they began their schooling in English. This may have resulted in "subtractive" bilingualism (Lambert et al., 1968), owing to the fact that the learning of the second language was not based on a solid grounding in the mother tongue; the development of skills in both the second language and the mother tongue may then have been deficient (Wagner, 1991, 2002; Boucher, 1989).

Except in Quebec and New Brunswick, the declining relative weight of Francophones within the Canadian population, along with their low concentration in some regions, exerts a pressure that tends to limit the use of French in Francophones' daily life and at work. Table 3 shows the language continuity index of Francophones in Canada compared to that of Anglophones in Quebec. Of course, use of the mother tongue is not limited to the home. However, the home, together with the school, is the place where most of a community's language knowledge is transmitted.

Table 3

Population with French as mother tongue and home language, by province, population with English as mother tongue and home language in Quebec and language continuity index, Canada, provinces and territories, 2001

Province or territory	Mother tongue	Home language	Index
Newfoundland and Labrador	2,348	991	0.42
Prince Edward Island	5,885	2,818	0.48
Nova Scotia	35,377	19,789	0.56
New Brunswick	239,357	217,773	0.91
Quebec			
French	5,802,022	5,918,385	1.02
English	591,378	746,890	1.26[1]
Ontario	509,264	307,297	0.60
Manitoba	45,932	20,892	0.45
Saskatchewan	18,633	4,805	0.26
Alberta	62,241	20,672	0.33
British Columbia	58,893	16,902	0.29
Yukon	933	433	0.46
Northwest Territories	1,006	392	0.39
Nunavut	405	225	0.56
Canada excluding Quebec	980,272	612,990	0.63
Canada	**6,782,294**	**6,531,375**	**0.96**

1. In the case of the English language in Quebec, the language continuity index is not very satisfactory; it is not very comparable to what is observed for the French language outside Quebec, owing to the powerful historical attraction exerted by this language on various allophone groups.

Source: 2001 Census.

Employment and economic issues

In an economic context in which globalization and open markets are an inescapable reality, there is a steady increase in the role and importance of a good level of literacy in the workplace. Not only are we seeing substantial computerization of work techniques and modes and means of production—leading to a new way of using language and mathematics (Wagner, 2002)—but new forms of work organization are increasingly requiring the use of the written word. Persons with a low level of education and reading difficulties are therefore increasingly less able to get by. On the other hand, the importance of a high level of literacy for workers enables them to increase their ability to adapt to the changes arising from the transformation of the economy. They are also more able to integrate into their workplace and participate in the development of their company. Wagner also notes:

> Literacy is the key to communication, information processing and problem-solving skills. It develops the ability to learn and adapt quickly and increases participation in work life and in the business sector in general. It encourages people to acquire a range of transferable skills. (p.17)

Literacy is also of great importance in the context of economic globalization, which in many cases is leading companies to relocate abroad. To maintain national competitiveness, it is therefore necessary to ensure that Canada's labour force is able to adapt to this transformation of markets (OECD and Statistics Canada, 1995). This transformation is in turn creating a greater demand for personnel who can work in high-tech industries as well as moderately and highly skilled technical, professional and administrative workers.

Francophones living in a minority situation have historically been disadvantaged in the job market and have often been confined to industries in the primary sector where they were vulnerable to shifts in the economy. Francophone communities were often located in rural areas, and Francophones' low education level limited their prospects for social and economic advancement. Those migrating to urban areas generally found themselves confined to particular production sectors, and often this urban integration was achieved at the expense of maintaining their French. In some provinces, the strong concentration of less literate Francophones in primary sectors of the economy made them vulnerable and weakened their economic and job security.

2.2 Previous surveys on the literacy of official language minorities

Several literacy surveys preceded the 2003 IALSS. In 1986, the Southam newspaper chain funded a survey whose objective was to measure the illiteracy rate in Canada. The term "illiterate" was used to describe those "who can barely read" and those whose "reading and writing and numbers skills are not sufficient to get by in everyday life." (Southam, 1987) The results of that survey revealed that the illiteracy rate of Anglophones (19%)[8] was much lower than that of Francophones (28%) and allophones (41%).

Three years later, in 1989, Statistics Canada conducted the *Survey of Literacy Skills Used in Daily Activities* (LSUDA). The data from that survey also showed that Quebec Anglophones did better in tests of reading and numeracy skills than their Francophone counterparts. The results of the LSUDA were distributed over a four-level scale. However, this distribution did not provide an adequate breakdown of the performance of persons at the higher level, since that level was very inclusive.[9] The LSUDA also revealed that the largest gaps between Anglophones and Francophones were in Quebec (13 percentage points at the highest level on the reading scale and 17 percentage points on the numeracy scale). Also, while New Brunswick had the narrowest gap between the language groups on the reading scale (6 percentage points compared to 9 percentage points in Ontario), it was in Ontario that the gap was narrowest (9 percentage points compared to 15 in New Brunswick) on the numeracy scale. The 1989 survey had also shown New Brunswick to perform poorly in tests involving numeracy exercises. It should be noted that in 1989, 13% of Francophones who participated in the LSUDA answered in English. A greater proportion of the latter ranked at the highest level, for both reading and numeracy skills.

Table 4

Distribution of population on reading and numeracy scales by mother tongue, New Brunswick, Quebec and Ontario, adults aged 16 and over, 1989

	Reading skills		Numeracy skills	
Mother tongue	Level 1 and 3	Level 4	Level1 and 2	Level 3
French				
Canada	**42**	**58**	**46**	**54**
New Brunswick	43	57	56	44
Quebec	42	58	47	53
Ontario	38	62	42	58
English				
Canada	**29**	**71**	**33**	**67**
New Brunswick	37	63	41	59
Quebec	29	71	30	70
Ontario	29	71	33	67

Source: Survey of Literacy Skills Used in Daily Activities, 1989.

The 1994 IALS was the first survey to evaluate Canadians' performance on three types of scales: prose, document and quantitative. The objective of this survey was to provide performance estimates at the national scale. Despite the limited size of the sample (5,660 respondents), oversampling of Francophones in New Brunswick and Ontario yielded a number of findings concerning the gaps between the language groups in Canada. Because of the greater refinement of the theoretical models on which this survey was based, and because of the use of more precise performance levels, it was now possible to identify persons more at risk of low literacy. On a proficiency scale extending from level 1 to level 5, level 3 is considered by experts as the minimum level associated with a number of skills that enable an individual to function adequately and flourish within his/her community. As in previous surveys, Francophones had lower results overall than Anglophones. The IALS results showed that whereas 38% of Canada's Anglophones were below level 3 on the prose scale, the corresponding proportion for Francophones was 52% and for allophones, nearly 74%.

The IALS data shed light on an important reality affecting Francophones living in a minority situation in Canada. Analyses based on these data showed that when relevant variables from the survey were introduced into linear regression models, major differences appeared between the Francophones of Quebec (i.e., Francophones living in a majority situation in their province) and those outside Quebec (living in a minority situation). When the average scores obtained by Quebec Francophones are compared to those of Anglophones in Canada as a whole, significant differences that exist between the two groups cease to exist when key factors such as education level, age and daily reading, writing and numeracy practices are controlled for or held constant. In short, disparities exist between Quebec Francophones and Anglophones in Canada as a whole, but the variables included in the IALS database explain them almost entirely. The situation is quite different regarding the Francophones of Ontario and, more especially, those of New Brunswick. Thus, even when all the variables that might explain the disparities between the two language groups are introduced into the model, a substantial portion of this statistical difference remains (Corbeil, 2000).

3. The 2003 IALSS

Conducted in 2003, the International Adult Literacy and Skills Survey (IALSS) is the Canadian component of the Adult Literacy and Life Skills (ALL) Survey. The ALL is "a large-scale co-operative effort undertaken by governments, national statistical agencies, research institutions and multi-lateral agencies" that provides internationally comparable measures in four domains: prose literacy, document literacy, numeracy and problem solving (OECD and Statistics Canada, 2005). Over 23,000 individuals aged 16 and over from across the ten provinces and three territories responded to the IALSS.

Box A

Literacy is a continuum

The 2003 International Adult Literacy and Skills Survey, like its predecessor, the 1994 International Adult Literacy Survey, is not a survey aimed at distinguishing those who are "literate" from those who are "illiterate." There is no arbitrary standard used in the IALSS to distinguish adults who have proficiency from those who do not. The IALSS measures literacy and numeracy along a continuum of proficiency that indicates how well adults use written information in today's society.

Box B

The Adult Literacy and Life Skills Program (ALL)

The development and management of the ALL study were co-ordinated by Statistics Canada and the Educational Testing Services (ETS, Princeton, United States) in collaboration with the National Center for Education Statistics (NCES) of the United States Department of Education, the Organization for Economic Co-operation and Development (OECD) and the Institute for Statistics (UIS) of the United Nations Educational, Scientific and Cultural Organization (UNESCO).

The ALL survey, undertaken during the first half of 2003, required all participating countries to collect data from a nationally representative sample of at least 3,000 respondents aged 16 to 65 for each language tested—English and French in the case of Canada. The minimum sample requirements for the ALL survey were exceeded in Canada because several federal agencies and provincial governments funded the collection of additional cases so as to ensure high reliability in the estimation of data values for small population groups. Moreover, unlike the 1994 IALS, the 2003 Canadian IALSS also benefited from contributions made by territorial governments. As a result, the number of respondents is sufficient to provide accurate estimates for the Yukon, Northwest Territories and Nunavut. Finally, as with the 1994 IALS, the 2003 IALSS added Canadians over the age of 65 to the sample. Over 23,000 individuals from across Canada spent an average of two hours responding to the IALSS. Annex Table 1 shows the actual distribution of respondents from across Canada by mother tongue.

Every respondent was first given a questionnaire seeking information about demographic characteristics and variables such as educational attainment, occupation, income and engagement in adult learning and community activities. The respondents were then given an internationally validated psychometric instrument designed to measure proficiency in four domains:

Prose literacy – the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.

Document literacy – the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.

Numeracy – the knowledge and skills required to effectively manage the mathematical demands of diverse situations.

Problem solving – problem solving involves goal-directed thinking and action in situations for which no routine solutions exist. The problem solver has a more or less well defined goal, but it is not immediately obvious how to reach it. The incongruence of goals and admissible operators constitutes a problem. The understanding of the problem situation and its step-by-step transformation, based on planning and reasoning, constitutes the process of problem solving.

The IALSS builds on its predecessor, the 1994 International Adult Literacy Survey (IALS). The IALSS numeracy scale expands the quantitative literacy domain measured in 1994 and is a broader, more inclusive measure of mathematics skills and knowledge. Problem solving is a new domain in 2003. The prose and document literacy scales used in 2003, however, are identical to those carried by the IALS in 1994. Thus, for several countries including Canada, it is now possible to examine both the current distributions of prose and document literacy and how these have evolved between 1994 and 2003.

Box C

The four domains: Prose and document literacy, numeracy and problem solving

The same prose and document literacy scales are used in both the 1994 IALS and the 2003 IALSS. For both domains, the proficiency scales from the two surveys were linked through the inclusion of a subset of test items originally used in 1994. Thus, for several countries including Canada, the current distributions of prose and document literacy can be compared to those in 1994 to see how these have evolved.

The 2003 IALSS numeracy scale builds on the quantitative literacy domain measured in 1994, providing a broader, more inclusive measure of mathematics skills and conceptual mathematical knowledge. This expanded scale measures more than the ability to perform mathematical operations on numbers embedded in text by including many tasks that require no or little reading.

Finally, the IALSS carried tasks to assess proficiency in problem solving. This new domain was validated through rigorous testing and displays unique characteristics not found in the other measures. To some extent, it requires the integration of the knowledge and skills measured by the literacy and numeracy domains and their application to new situations. It also implicates basic logical tools needed to provide effective solution strategies to the problems presented in everyday life. These include the ability to order, evaluate and prioritize a series of factors and to discriminate, plan, analyse and reason through a variety of choices in order to arrive at an effective solution to a given problem.

3.1 How to interpret the IALSS

Like the IALS before it, the 2003 IALSS conceptualizes proficiency along a continuum that denotes how well adults use information to function in society and the economy. The IALSS does not measure the absence of competencies; rather, it measures knowledge and skills in four domains along a broad range of ability. Consequently, the results cannot be used to classify population groups as either "literate" or "illiterate."

Proficiency in each domain is measured on a continuous scale. Each scale starts at zero and increases to a theoretical maximum of 500 points. Scores along the scale denote the points at which a person with a given level of performance has an 80 percent probability of successfully completing a task at that level of difficulty (see Text Box D).

Useful summary statistics can be derived that describe the competencies of populations such as their overall average score. Populations with similar average scores, however, may have quite different numbers of low or high performing adults. Thus, one can also look at how the scores are distributed within populations by using percentile scores. Percentile scores are the scores below which a specified percentage of adults are found. Thus, for example, the 5th percentile score is the one below which we find 5 percent of adults in a particular population. Differences in percentile scores tell us something about the degree of equality in proficiency differences across populations.

The IALSS scores are also grouped into proficiency levels representing a set of tasks of increasing difficulty (see Figure 1). For the prose and document literacy domains as well as the numeracy domain, experts have defined five broad levels of difficulty, each corresponding to a similar range of scores. For the problem solving domain, experts have defined four broad levels of difficulty. In each domain, Level 1 denotes the lowest proficiency level and Level 4/5 (level 4 for the problem solving domain) the highest.

It is important, for analytical as well as operational reasons, to define a "desired level" of competence for coping with the increasing skill demands of the emerging knowledge and information economy. Level 3 performance is generally chosen as a minimum benchmark because in developed countries, performance above Level 2 is generally associated with a number of positive outcomes. These include increased civic participation, increased economic success and independence, and enhanced opportunities for lifelong learning and improvement of personal literacy (Kirsch, I. et al., 1993; Murray, T.S. et al., 1997; Tuijnman, A., 2001). Whereas individuals at proficiency levels 1 and 2 typically have not yet mastered the minimum foundation of literacy needed to attain higher levels of performance (Strucker, J., Yamamoto, K., 2005).

An analysis of the 1994 IALS data has yielded consistent evidence that the performance difference between Level 2 and Level 3 on the prose, document and quantitative literacy scales is substantive and corresponds to a significant difference in measurable benefits accruing to citizens in OECD countries (OECD and HRDC, 1997). Results of preliminary analysis of the IALSS data, including the new numeracy scale, are consistent with this finding. For this reason, some of the analyses contained in this report anchor the scales at the cut point between Levels 2 and 3, thus highlighting the distributions above and below this threshold of the prose, document and numeracy domains. In contrast, interpretation of the problem solving domain (See Figure 2) is more complex and no single "desirable" threshold has yet been set.

Thus, the tables and charts included in this report provide multiple ways to examine how the distributions of competencies differ across Canada.

Box D

Measuring proficiency

For IALSS, each proficiency scale starts at zero and increases to a theoretical maximum of 500 points. Scores along the scale denote the points at which a person with a given level of performance has an 80 percent probability of successfully completing a task at that level of difficulty. For instance, a person with an assessed performance at 250 points has an 80 percent probability of correctly answering a task with an estimated difficulty level of 250. The same individual would have an "80 percent plus" probability of correctly answering a simpler task (about 95 percent for a task with a complexity of 200) and a diminished probability (less than 80 percent) of successfully completing a more difficult task (about 40 percent for a task with a complexity of 300) (Kirsch, Jungeblut and Campbell, 1992).

Interestingly, while the probability of a correct response may approach zero as the tests become more difficult, it can never quite reach it because there is always some chance, however, small, that a correct answer will be provided regardless of ability. Accordingly, the results presented in this report measure performance along a proficiency continuum. The scales do not measure the absence of a competence, and thus cannot distinguish those who have from those who lack a specific competency.

The proficiency levels used for IALSS are useful in summarizing the results but also have some limitations. First, the relatively small proportions of respondents who actually reach Level 5 do not always allow for accurate reporting. For this reason, whenever results are presented by proficiency level, Levels 4 and 5 are combined. Second, as shown in Figures 1 and 2, the levels indicate specific sets of abilities and, therefore, the thresholds for the levels are not equidistant. The ranges of scores in each level are therefore not identical. In fact, for all four domains, Level 1 captures almost half the scale. The thresholds for the problem solving domain are set somewhat differently and Level 1 covers precisely half of the scale. Level 1 includes all basic abilities required to attain higher levels. In other words, the ability to read may lie somewhere in Level 1, but the ability to understand and use what has been read comes in gradations of complexity from Level 1 to Level 5. The upshot of the relatively large ranges of scores in Level 1 on each of the scales is that there are multiple sub-levels of proficiency within this level. The range includes those who can barely read at all as well as those who read poorly or inattentively.

Figure 1

Five levels of difficulty for the prose, document and numeracy domains

	Prose	Document	Numeracy
Level 1 (0 to 225)	Most of the tasks in this level require the respondent to read relatively short text to locate a single piece of information which is identical to or synonymous with the information given in the question or directive. If plausible but incorrect information is present in the text, it tends not to be located near the correct information.	Tasks in this level tend to require the respondent either to locate a piece of information based on a literal match or to enter information from personal knowledge onto a document. Little, if any, distracting information is present.	Tasks in this level require the respondent to show an understanding of basic numerical ideas by completing simple tasks in concrete, familiar contexts where the mathematical content is explicit with little text. Tasks consist of simple, one-step operations such as counting, sorting dates, performing simple arithmetic operations or understanding common and simple percents such as 50%.
Level 2 (226 to 275)	Some tasks in this level require respondents to locate a single piece of information in the text; however, several distracters or plausible but incorrect pieces of information may be present, or low-level inferences may be required. Other tasks require the respondent to integrate two or more pieces of information or to compare and contrast easily identifiable information based on a criterion provided in the question or directive.	Tasks in this level are more varied than those in Level 1. Some require the respondents to match a single piece of information; however, several distracters may be present, or the match may require low-level inferences. Tasks in this level may also ask the respondent to cycle through information in a document or to integrate information from various parts of a document.	Tasks in this level are fairly simple and relate to identifying and understanding basic mathematical concepts embedded in a range of familiar contexts where the mathematical content is quite explicit and visual with few distracters. Tasks tend to include one-step or two-step processes and estimations involving whole numbers, benchmark percents and fractions, interpreting simple graphical or spatial representations, and performing simple measurements.
Level 3 (276 to 325)	Tasks in this level tend to require respondents to make literal or synonymous matches between the text and information given in the task, or to make matches that require low-level inferences. Other tasks ask respondents to integrate information from dense or lengthy text that contains no organizational aids such as headings. Respondents may also be asked to generate a response based on information that can be easily identified in the text. Distracting information is present, but is not located near the correct information.	Some tasks in this level require the respondent to integrate multiple pieces of information from one or more documents. Others ask respondents to cycle through rather complex tables or graphs which contain information that is irrelevant or inappropriate to the task.	Tasks in this level require the respondent to demonstrate understanding of mathematical information represented in a range of different forms, such as in numbers, symbols, maps, graphs, texts, and drawings. Skills required involve number and spatial sense, knowledge of mathematical patterns and relationships and the ability to interpret proportions, data and statistics embedded in relatively simple texts where there may be distracters. Tasks commonly involve undertaking a number of processes to solve problems.
Level 4 (326-375)	These tasks require respondents to perform multiple-feature matches and to integrate or synthesize information from complex or lengthy passages. More complex inferences are needed to perform successfully. Conditional information is frequently present in tasks at this level and must be taken into consideration by the respondent.	Tasks in this level, like those at the previous levels, ask respondents to perform multiple-feature matches, cycle through documents, and integrate information; however, they require a greater degree of inference. Many of these tasks require respondents to provide numerous responses but do not designate how many responses are needed. Conditional information is also present in the document tasks at this level and must be taken into account by the respondent.	Tasks at this level require respondents to understand a broad range of mathematical information of a more abstract nature represented in diverse ways, including in texts of increasing complexity or in unfamiliar contexts. These tasks involve undertaking multiple steps to find solutions to problems and require more complex reasoning and interpretation skills, including comprehending and working with proportions and formulas or offering explanations for answers.
Level 5 (376 to 500)	Some tasks in this level require the respondent to search for information in dense text which contains a number of plausible distracters. Others ask respondents to make high-level inferences or use specialized background knowledge. Some tasks ask respondents to contrast complex information.	Tasks in this level require the respondent to search through complex displays that contain multiple distracters, to make high-level text-based inferences, and to use specialized knowledge.	Tasks in this level require respondents to understand complex representations and abstract and formal mathematical and statistical ideas, possibly embedded in complex texts. Respondents may have to integrate multiple types of mathematical information, draw inferences, or generate mathematical justification for answers.

Figure 2

Four levels of difficulty for the problem solving domain

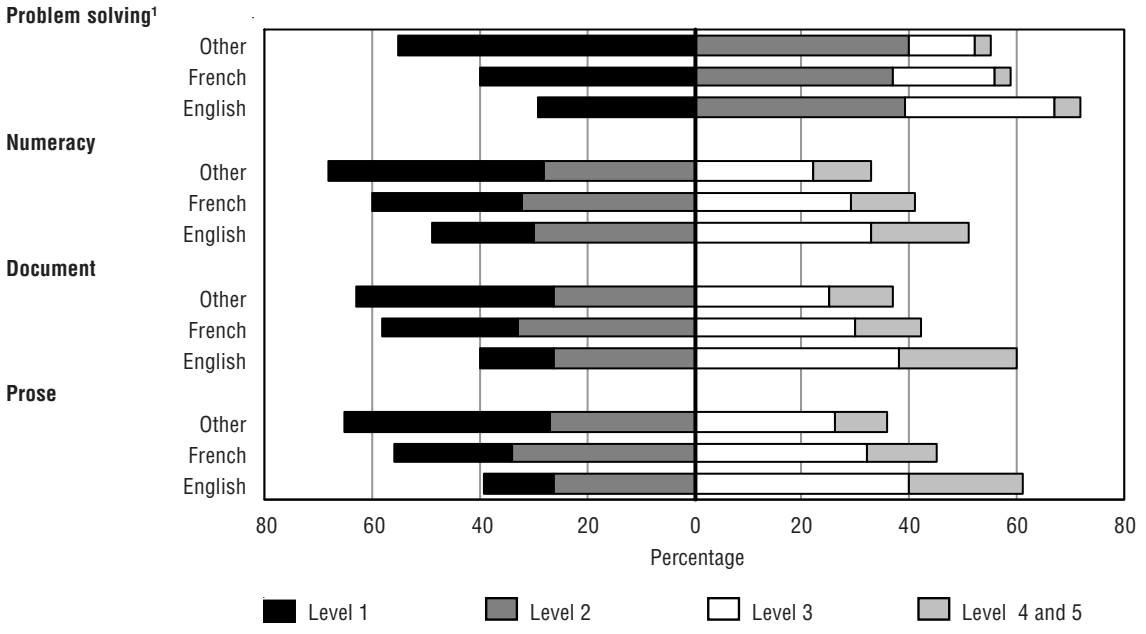
	Problem solving
Level 1 (0 to 250)	Tasks in this level typically require the respondent to make simple inferences, based on limited information stemming from a familiar context. Tasks in this level are rather concrete with a limited scope of reasoning. They require the respondent to make simple connections, without having to check systematically any constraints. The respondent has to draw direct consequences, based on the information given and on his/her previous knowledge about a familiar context.
Level 2 (251 to 300)	Tasks in this level often require the respondent to evaluate certain alternatives with regard to well-defined, transparent, explicitly stated criteria. The reasoning however may be done step by step, in a linear process, without loops or backtracking. Successful problem solving may require to combine information from different sources, as e.g. from the question section and the information section of the test booklet.
Level 3 (301 to 350)	Some tasks in this level require the respondent to order several objects according to given criteria. Other tasks require him/her to determine a sequence of actions/events or to construct a solution by taking non-transparent or multiple interdependent constraints into account. The reasoning process goes back and forth in a non-linear manner, requiring a good deal of self-regulation. At this level respondents often have to cope with multi-dimensional or ill-defined goals.
Level 4 (351 to 500)	Items in this level require the respondent to judge the completeness, consistency and/or dependency among multiple criteria. In many cases, he/she has to explain how the solution was reached and why it is correct. The respondent has to reason from a meta-perspective, taking into account an entire system of problem solving states and possible solutions. Often the criteria and the goals have to be inferred from the given information before actually starting the solution process.

4. The IALSS and the relative distribution of competencies by language group

The results obtained in the IALSS literacy tests confirm that there are major gaps in how well Francophones, Anglophones and allophones performed. Individuals with English as their mother tongue did much better in the different literacy and numeracy tests than those in the other language groups. Whereas 13% of them placed at the first proficiency level on the prose scale, the corresponding proportion for Francophones was 22% and for allophones, 38%. At the other end of the scale, nearly 21% of Anglophones reached at least Level 4, compared to 13% for Francophones and 10% for allophones.

Chart 2

Distribution of proficiency levels on the different literacy scales by mother tongue, IALSS, 2003



1. The problem solving domain has only 4 categories and Level 1 covers half the scale from 0 to 500. However, no threshold was identified as was done for the other domains.

The distribution of results is similar for the document scale while for the numeracy scale and problem solving scale, the proportion of individuals at the first two levels is much higher.

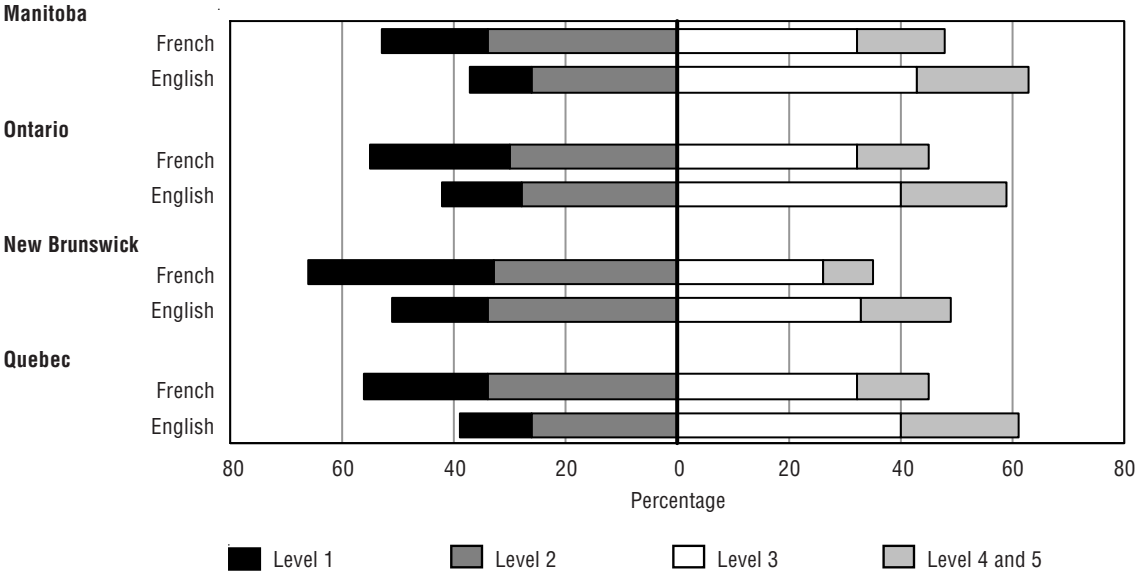
Because of the limited size of the sample of persons whose mother tongue is other than English or French, the results obtained by these persons will not be analysed in this report. The allophone group is made up of persons of quite diverse origins and situations. As may be seen in Chart 2, a large proportion of individuals with neither English nor French as their mother tongue rank at Level 1 on the different scales. However, proportions comparable to those of Francophones are observed at the higher levels on these scales. This polarization is not new; data from the Canadian census showed that the allophone population, which is largely the product of immigration, was quite polarized with respect to highest level of schooling. A large proportion of them had little education while a substantial proportion were highly educated. Also, problems related to the use of one of the official languages are also likely to have a negative impact on allophones' performance in the literacy tests.

4.1 Interprovincial comparison

The performance of members of the various language groups varies from one province to another. For example, 66% of New Brunswick Francophones fell short of Level 3 on the prose scale, compared to just under 55% of Francophones in Quebec, Ontario and Manitoba. Among Anglophones, a larger proportion in New Brunswick than in other provinces placed below Level 3. The performance was similar for the other scales.

Chart 3

Proficiency level on prose scale by mother tongue and region, IALSS, 2003



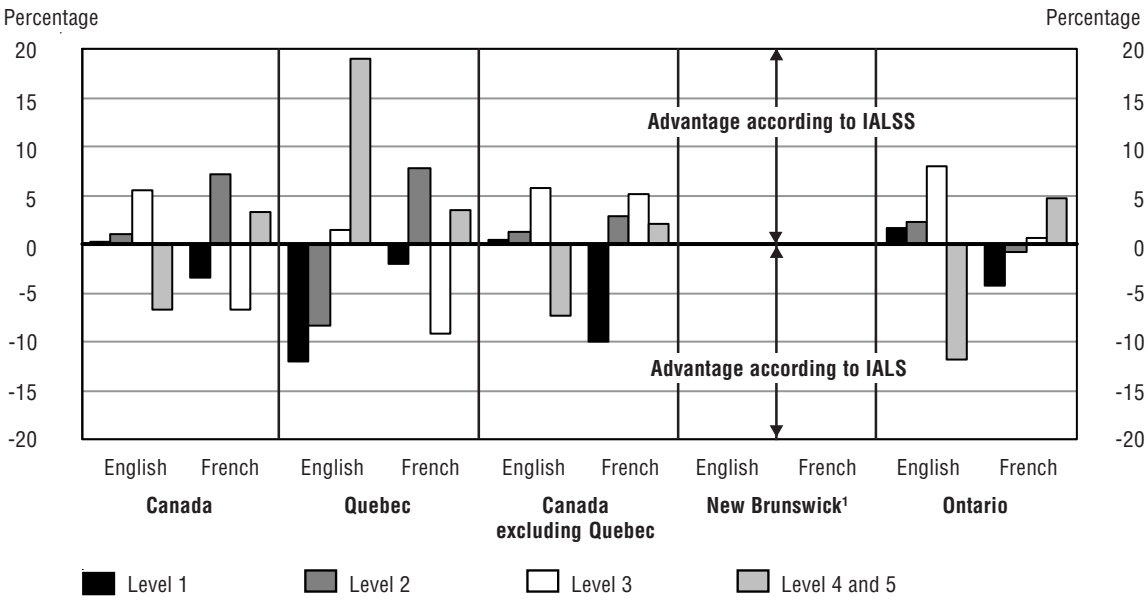
Because prose and document proficiencies were measured using the same method and a bank of comparable items in 1994 and 2003, it is possible to examine whether the results varied from one survey to the other. For Canada as a whole, the 2003 results indicate that the performance of Anglophones varied little, except that proportionally fewer persons attained levels 4 and 5 in 2003 and more placed at Level 3. Variations between the two surveys are greater for Francophones, at least on the prose scale. Proportionally fewer Francophones placed at Level 1 and more at Level 2. There was also an increase of 4 percentage points for individuals who attained Level 4 or 5 compared to 1994, but a decrease of 7 percentage points for those who attained Level 3.

Outside Quebec, while the factors responsible cannot be determined precisely, in 2003 there was a sizable decrease in the proportion of Francophones at Level 1 (10 percentage points) compared to 1994 (see charts 4 and 5). Corresponding to this decrease at the lowest level of the scale is an increase in the proportion of persons at levels 2 and 3. For Quebec Anglophones, the only increase that is significant is a substantial rise in the proportion of persons at the top of the scale (nearly 20 percentage points), on both the prose and document scales.

These changes affect the average scores obtained by the language groups. Chart 6 shows a statistically significant increase in the average score of Quebec Anglophones between 1994 and 2003 on the prose scale. For Francophones outside Quebec, the average score improved by approximately 14 percentage points, mainly owing to the better performance of Franco-Ontarians compared to 1994. Although the causes for this cannot be determined precisely, this improvement is essentially due to the decrease noted above in the proportion of persons ranking at Level 1 on each of the scales. New Brunswick shows no statistically significant increase between the two surveys, for either Francophones or Anglophones. As to the document scale (Chart 7), a similar trend is observed for Francophones outside Quebec, whereas for Anglophones, Ontario exhibits a significant decrease of nearly 12 percentage points.

Chart 4

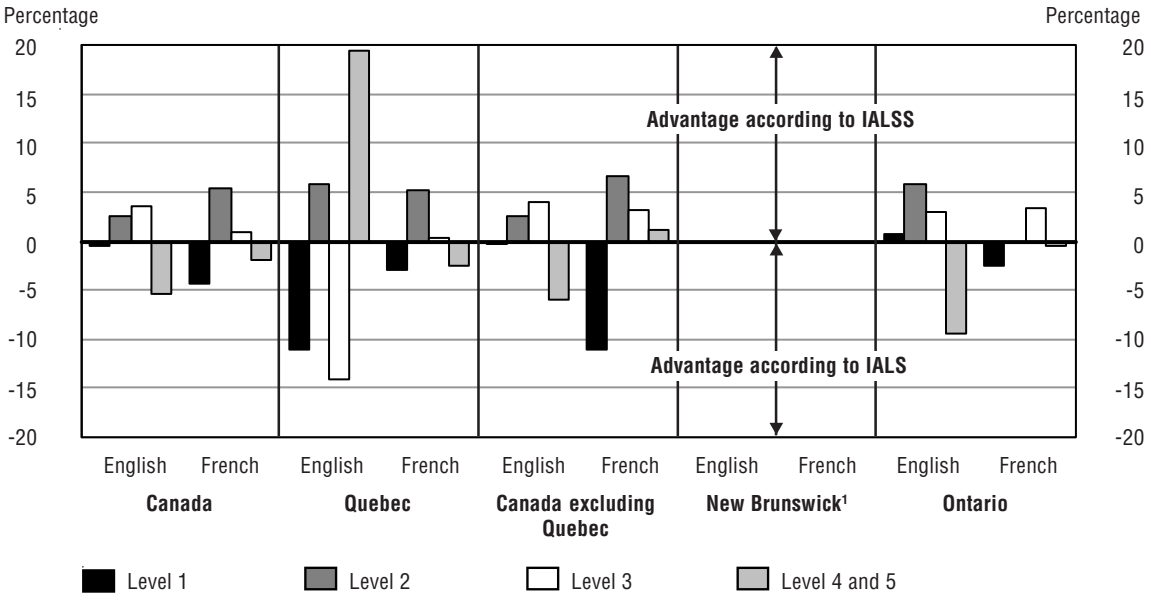
Variation in results by level on prose scale between 2003 and 1994, population aged 16 and over, IALS and IALSS



1. No statistically significant variation was observed between 1994 and 2003.

Chart 5

Variation in results by level on document scale between 2003 and 1994, population aged 16 and over, IALS and IALSS



1. No statistically significant variation was observed between 1994 and 2003.

Chart 6

Comparison of average scores for 2003 and 1994, prose scale

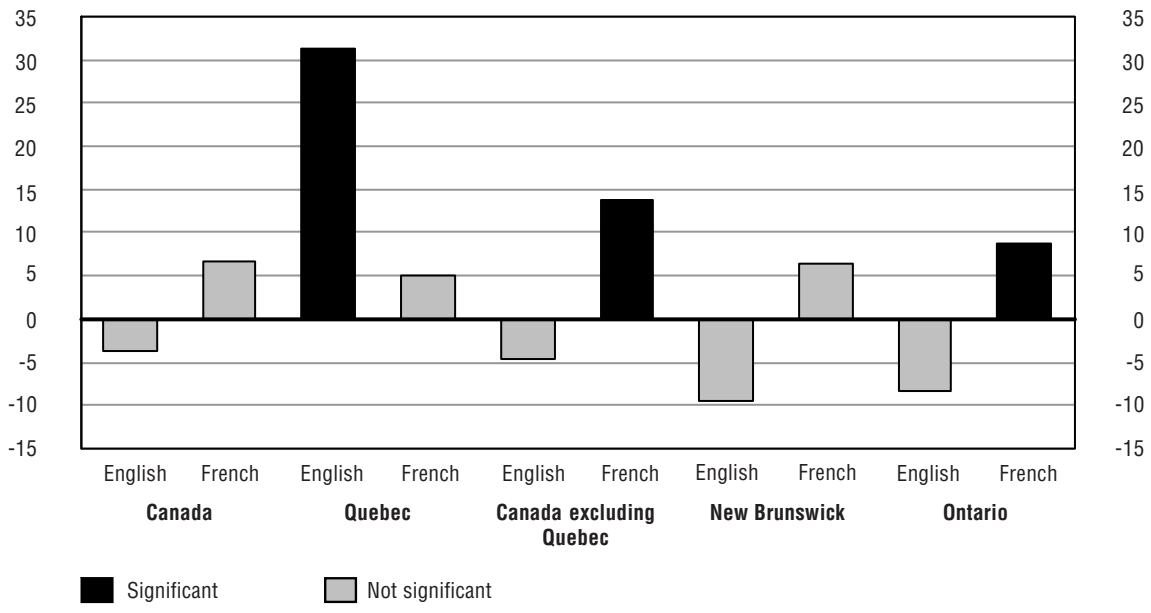
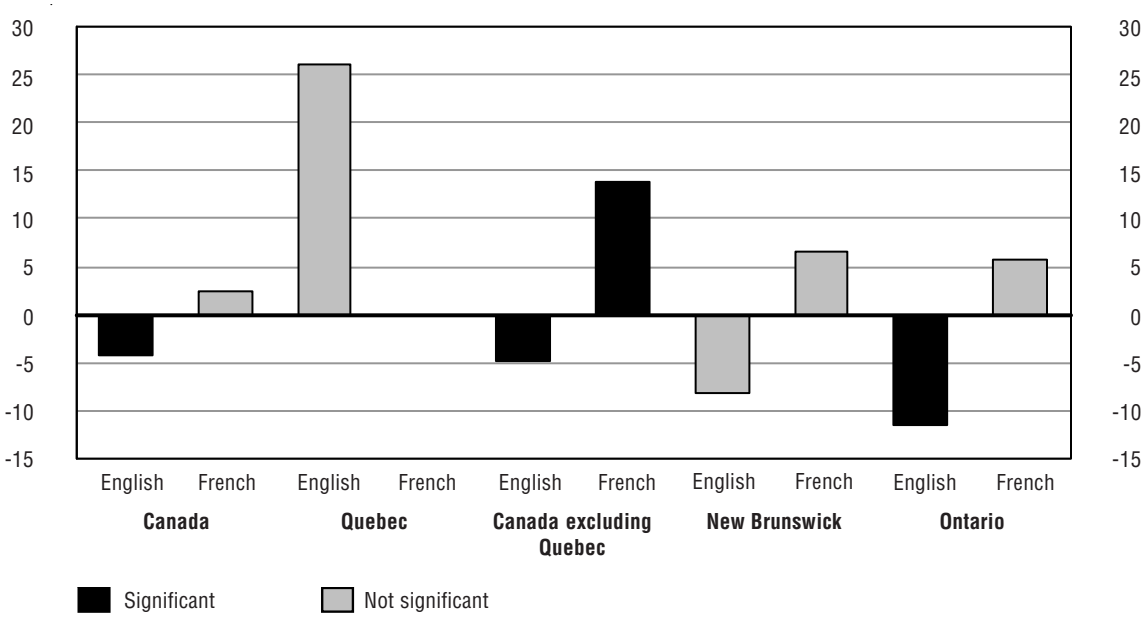


Chart 7

Comparison of average scores for 2003 and 1994, document scale

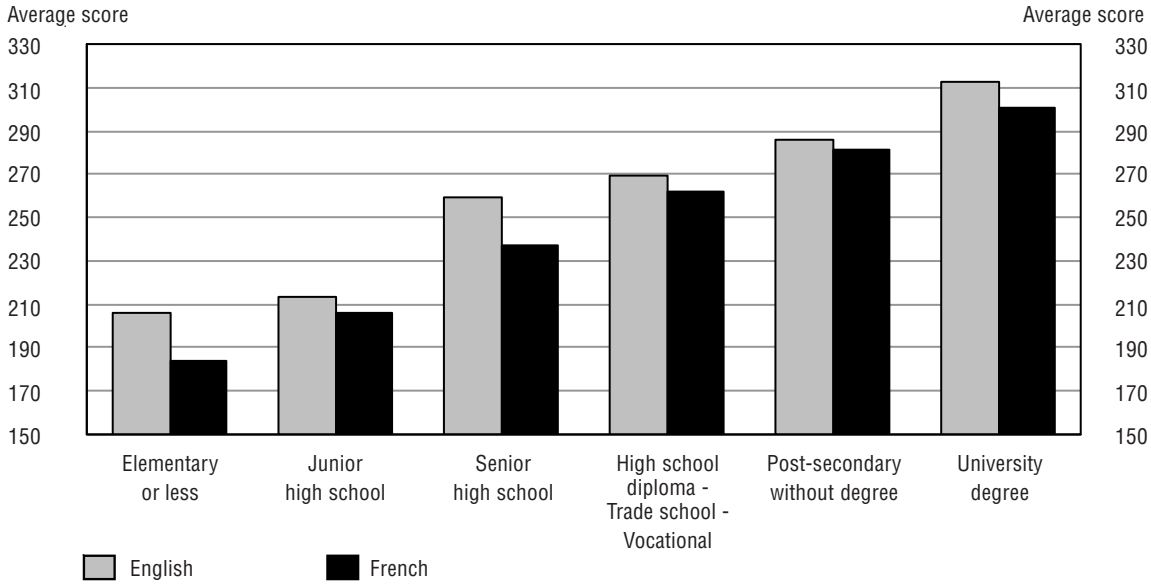


5. Literacy and education

Education is probably the main factor that comes to mind to explain differences in literacy levels. However, while the correlation between the two has been shown in the past in previous surveys and in the national IALSS report, the results of the 1994 IALS showed that the link between literacy and education level is complex. For example, some adults managed to reach a relatively high level of reading proficiency despite a low education level. Conversely, it was found that other individuals were low in proficiency despite a fairly high education level. In any event, the IALS clearly showed the link between literacy proficiency level and highest level of schooling. It could therefore be assumed that when the highest level of schooling is held constant, there should be no significant gap between the language groups. This was borne out by the 2003 results, especially for Quebec. In that province, except for adults whose highest level of schooling was a diploma from high school or a trade school or a diploma of the same level, no statistically significant difference appeared to exist between Francophones and Anglophones (see Chart 8a). Like Quebec, New Brunswick exhibits no gap between Anglophones and Francophones when we compare the average scores of language groups for a given education level. The situation is different in Ontario, which has the largest number of Francophones outside Quebec. Except for the results for individuals with either little or very little education, significant gaps exist between Anglophones and Francophones in the literacy levels attained, for a given level of schooling completed. A similar situation is observed in Manitoba, except that the largest gaps in the average score between the two language groups are for those with no post-secondary education. There is therefore every indication that it is necessary to look elsewhere than in education alone to find the cause of these gaps.

Chart 8a

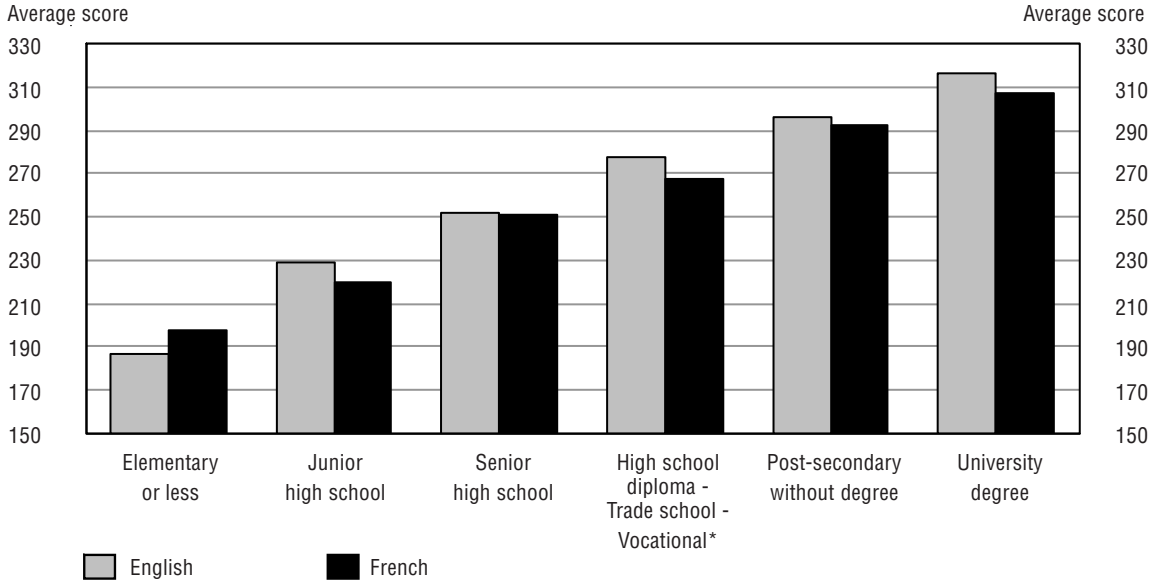
Average results* on the combined prose and document scale by highest level of schooling according to mother tongue, Quebec, population aged 16 and over, 2003



* Only levels with an asterisk are significant at the alpha level of .05

Chart 8b

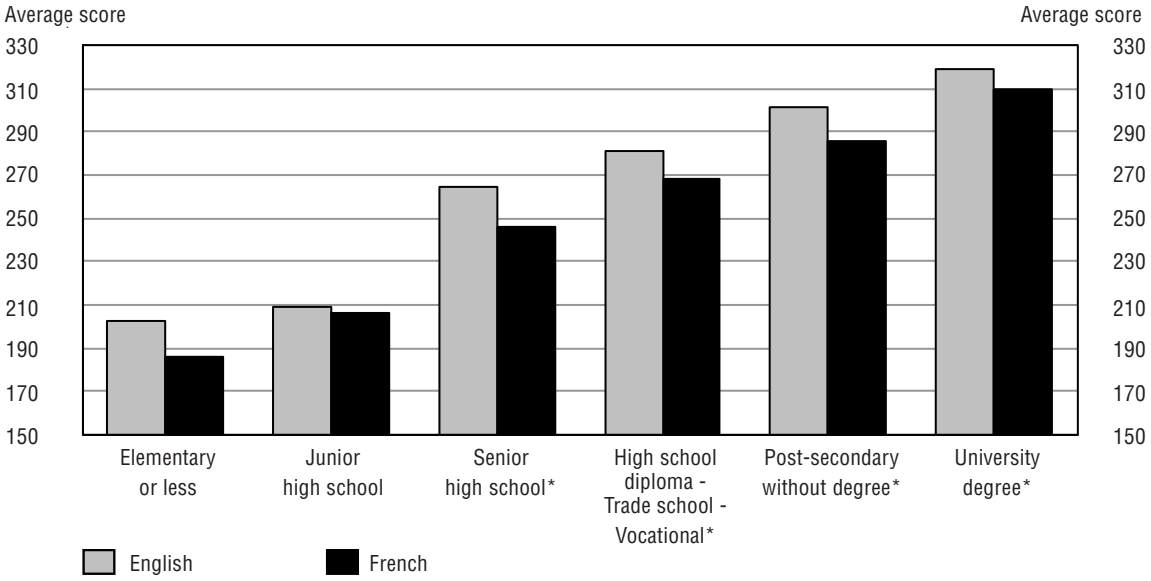
Average results* on the combined prose and document scale by highest level of schooling according to mother tongue, New Brunswick, population aged 16 and over, 2003



* Only levels with an asterisk are significant at the alpha level of .05

Chart 8c

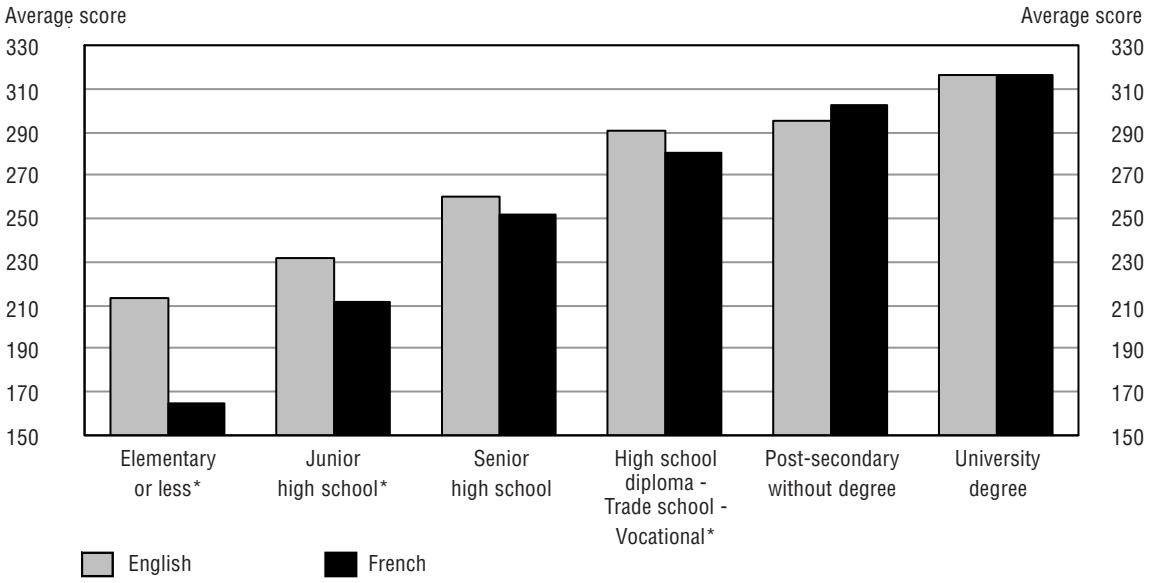
Average results* on the combined prose and document scale by highest level of schooling according to mother tongue, Ontario, population aged 16 and over, 2003



* Only levels with an asterisk are significant at the alpha level of .05

Chart 8d

Average results* on the combined prose and document scale by highest level of schooling according to mother tongue, Manitoba, population aged 16 and over, 2003



* Only levels with an asterisk are significant at the alpha level of .05

5.1 Age and literacy proficiency level

Considering that literacy skills can be acquired, developed, maintained or even lost during a lifetime, the relationship between proficiency level and age is complex (OECD, Statistics Canada, 2005). Age can greatly influence an individual's performance because various events have played a part throughout life in determining that proficiency level.[10] Among the factors that affect the proficiency level in literacy are exposure to reading and writing during early childhood, school attendance, the transition to the labour market, daily practices relating to the written word both at work and at home, and lastly the maintenance of these habits at retirement age. Thus, as the Canadian report on the IALSS (OECD, Statistics Canada, 2005, pp. 41-43) points out, the link between age or aging and literacy skill level may be shaped by a number of factors. These include aging, the practice, cohort and period effects, and the effects of recent schooling (the "recency effect"). Some research studies suggest that over the years, the level of cognitive performance tends to diminish as do the abilities to concentrate, memorize, reason and quickly process information. These aging effects are themselves influenced by practice effects insofar as cognitive skills can be improved over the years as a result of accumulating various reading- and writing-related experiences. The importance of these practice effects partly explains the IALSS findings indicating that differences between those who obtained the lowest results in testing and those who obtained the highest results tend to be much greater among older individuals. This suggests that there is greater variability of performance among the elderly, a situation that generally results from the accumulation of various types of experience over the course of a life.

Both in Quebec and outside Quebec, the results of the IALSS show no significant gap between Anglophones and Francophones aged 16 to 24. However, the older the age group, the wider the gap. Among persons aged 65 and over, approximately 92% of Canada's Francophones rank below level 3 on the combined prose and document scale, compared to 74% and 78% of Quebec Anglophones and Anglophones outside Quebec respectively. Furthermore, a major finding emerges from a comparison of the performance of Francophones living in Quebec and those living outside that province. Whereas 31% of Quebec Francophones aged 16 to 24 ranked below Level 3 on the combined literacy scale, the corresponding proportion was 41% among Francophones living outside Quebec (see Chart 9).

Chart 9

Percentage distribution of literacy levels on combined prose and document scale by age group and mother tongue, Quebec and Canada excluding Quebec, 2003

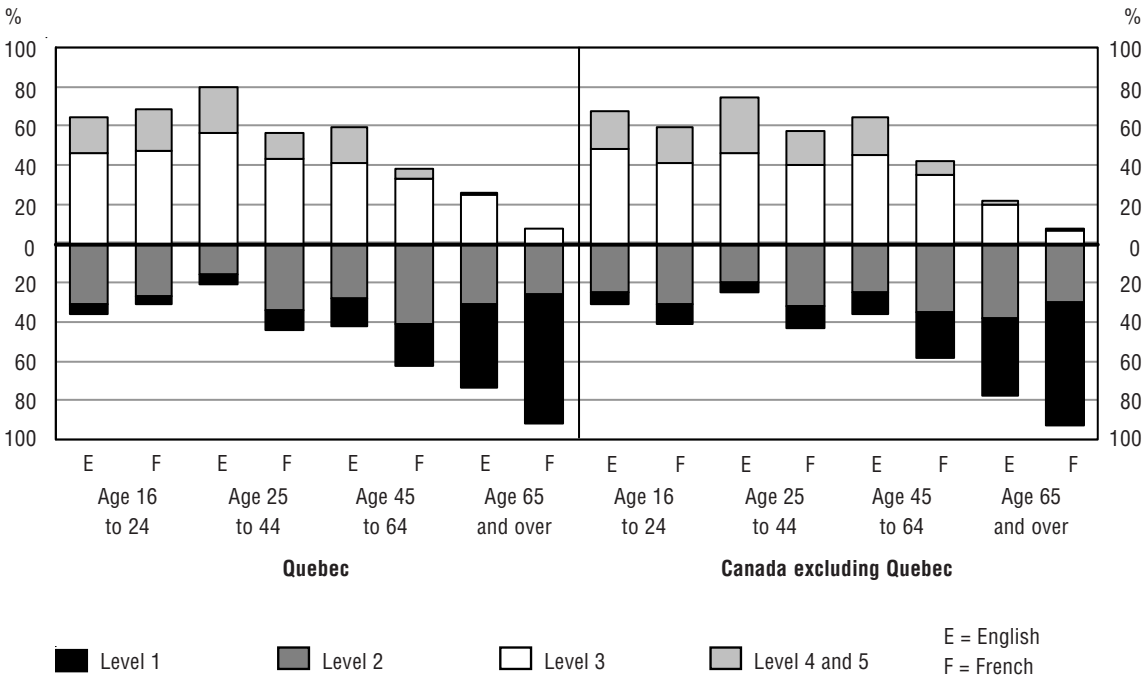
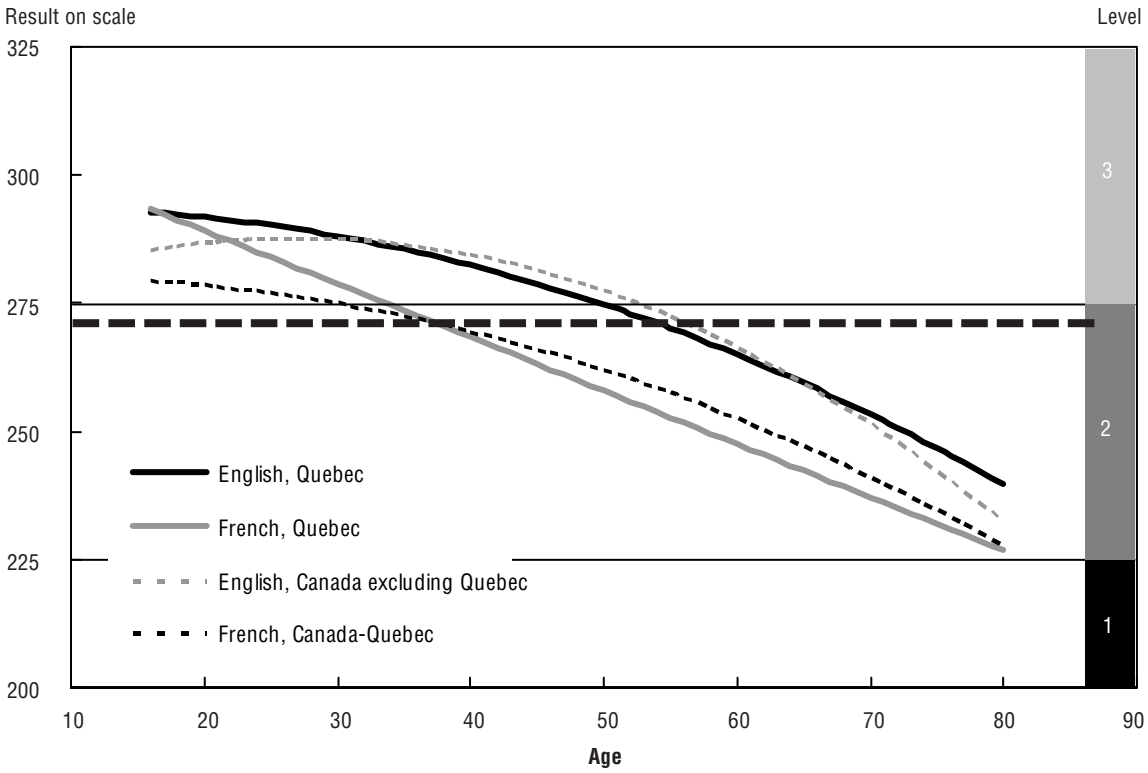


Chart 10 illustrates the relationship between age and average score for a given level of schooling. It clearly shows that the average score declines with age. It also shows that while for a given level of schooling, a significant gap exists between Quebec Francophones under 30 years of age and their counterparts outside Quebec, this gap disappears among older Francophones. Conversely, while there is practically no difference in the performance of young Francophones in Quebec and young Anglophones in Canada as a whole, a statistically significant gap exists between their older counterparts. Thus, even though they have the same level of schooling, Anglophones over age 30 continue to perform better than Francophones. The gap gradually narrows between members of the two language groups over age 65 with the notable exception of the superior performance of Quebec Anglophones. The IALSS results tend to confirm that education is not the only factor that influences individuals' literacy level. Thus, beyond formal schooling, it is very clear that labour market experiences, habits related to the written word and engagement in various forms of adult education and lifelong learning play a major role in skills acquisition and retention (OECD and Statistics Canada, 2005:46).

Chart 10

Relationship between age and average score on combined prose and document scale according to mother tongue, adjusted for level of schooling, Quebec and Canada excluding Quebec, population aged 16 and over, 2003



The results of the 1994 IALS and the international report on the IALSS (OECD and Statistics Canada, 2005) show that a low level of schooling corresponds not only to a low proficiency level but also, for young persons, to difficulties integrating into the labour market, taking advantage of lifetime learning opportunities and holding onto a job. The results presented in Chart 11 show that among individuals under age 45, the probability of ranking at Level 1 or 2 on the numeracy scale is not only much higher for those who have not completed high school in comparison to those with post-secondary education, but that the probability of not attaining Level 3 is lower for those who went back to school than for those who dropped out. Using the logistic regression method (see box x1), it is possible to compare the odds ratios (see box x2) associated with falling into one category rather than another. The results shown in Chart 11 show that Francophones outside Quebec whose highest level of schooling is junior high school or less and who were not in school at the time of the survey have 23 times higher a probability of having a proficiency level below Level 3 in numeracy than those with post-secondary education. In comparison, among Francophones who reached at most junior high school but who were in school at the time of the survey, this risk is 10 times greater than for those with post-secondary education. The results also show that young people who completed high school or the equivalent are at much lower risk of ranking at the lowest two proficiency levels than those who dropped out before completing high school. Lastly, the gap between Francophones and Anglophones is very wide for those who did not go beyond junior high school but it narrows considerably as the level of schooling rises.

Box x1

Logistic regression

The logistic regression technique is used when we have a dependent variable with only two levels (such as, on the literacy scale, Level 2 or less, Level three and above). Coding the dependant variable as a 1 for 'Level 2 or less' and a 0 for 'Level 3 and above', we would like the regression equation to predict a number between 0 and 1 which could be interpreted as the probability that a person's proficiency in literacy be under Level 3 or not. Thus, the logistic regression method uses a transformation (called a logit) which forces the prediction equation to predict values between 0 and 1. A logistic regression equation predicts the natural log of the odds for a subject being in one category or another. Moreover, the regression coefficients in a logistic regression equation can be used to estimate odds ratios for each of the independent variables.

Box x2

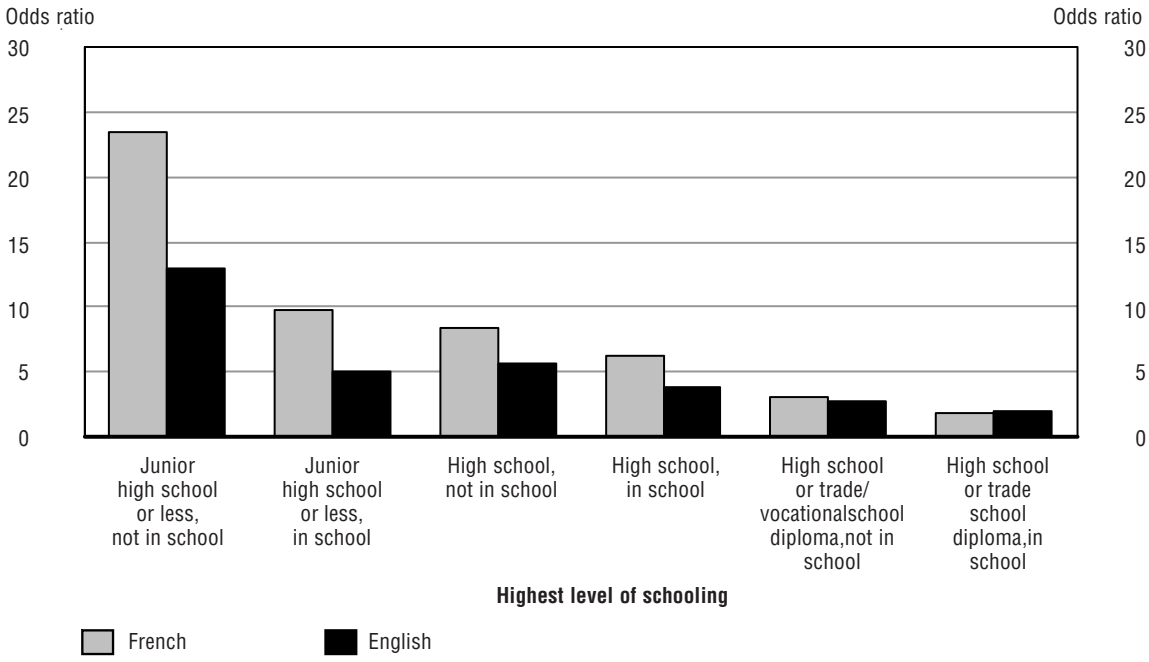
Odds ratio

The term "odds ratio" is mainly used in the context of logistic modelling. If the occurrence of an event or situation has a ratio of 5 to 1, this means that in six trials, there will be, on average, one success and five failures. The probability of success (p_1) is 1/6 and the probability of failure ($1-p_1$) is 5/6. The odds ratio for the event is $p_1 / (1-p_1)$, or in this case 1/5. In this context, "to" as used in "5 to 1" means "divides." If a second event has a ratio of 3 to 2, the probability of occurrence or success (p_2) will be 2/5; its complement ($1-p_2$), the probability of non-occurrence or failure, will be 3/5. The ratio for this second event is $p_2 / (1-p_2)$, or 2/3.

By dividing the ratio for the second event by that for the first event, which serves as a reference point, we obtain the following odds ratio: $[p_2/(1-p_2)]/[p_1 / (1-p_1)]$. In this example, the ratio is 10/3; the second event therefore occurs much more often than the first.

Chart 11

Odds ratios[1] showing probability of placing at first two levels on numeracy scale according to highest level of schooling and current school attendance[2], by mother tongue, persons aged 16 to 44, Canada excluding Quebec, 2003



1. Post-secondary level is the benchmark level.
2. Adjusted for age.

6. Literacy of Francophones and literacy in French

Canada-wide, almost all Anglophones (99%) and allophones (94%) did the test in English. Among Francophones, a sizable proportion (12%) also chose that language as the testing language. While 98% of Quebec Francophones did the test in French, only 34% of their counterparts outside Quebec did so.[11] This proportion varied depending on the province of residence. The results show that outside Quebec, approximately 66% of Francophones did the tests in English. In New Brunswick, Ontario and Manitoba, the proportions were 35%, 63% and 85% respectively.

However, these findings must be seen in perspective, since they are not necessarily a sign of anglicization or language transfer on the respondent's part. As Table 5 shows, while 34% of Francophones outside Quebec did the test in French, French is the main language spoken at home for 58% of Francophones.[12] This difference can be interpreted in various ways. Since many Francophones feel that they have a "bilingual" identity (Bernard, 1988, 1998), it may not matter to them whether they do the test or interview in French or English; this choice may depend on their sense of belonging to the language group of the interviewer, even if the latter gave the respondent the opportunity to use the language of his/her choice. Another interpretation, plausible in light of the IALSS statistics, would be that among Francophones outside Quebec who did the interview in English (63%), 82% stated that their ability to speak French was good or very good, but only 52% described their ability to write in that language as good or very good. By comparison, 64% of them described their ability to read French as good or very good.

It is interesting to note that in the IALSS, 81% of Quebec Anglophones did the test in English and 19% did it in French. However, this result must be taken with caution because of the error level associated with this estimate.[13]

Table 5

Proportions of use or presence of French for adults with French as their mother tongue, New Brunswick, Ontario, Manitoba and Canada excluding Quebec, percentage, 2003

	Canada excluding Quebec	Standard error	New Brunswick	Standard error	Ontario	Standard error	Manitoba	Standard error
Language of interview	37	1.5	79	2.5	36	1.3	14	1.4
Language of test	34	1.4	65	2.3	37	1.2	15	1.8
Language spoken most often at home	58	1.5	90	1.3	58	1.3	44	3.1
Language spoken at home on a regular basis[1]	22	1.4	7	1.1	23	1.2	30	3.3
Percentage of Francophones interviewed in English who indicated having a good or very good ability to speak, read or write French:								
Ability to speak	82	1.5	80	3.2	87	1.1	78	4.0
Ability to read	64	1.5	61	4.6	72	1.4	66	3.7
Ability to write	52	1.9	52	4.5	58	1.6	53	3.6

1. Other than the language spoken most often.

Source: IALSS, 2003.

6.1 Test language and results

Although the 1994 results suggested that a larger proportion of Francophones who did the tests in English ranked at Level 1 or Level 2 on the prose scale, no significant difference was observed in 2003 for either literacy scale. However, this finding is influenced by the performance of Quebec Francophones. An examination of the situation of Francophones outside Quebec shows that the relationship observed in 1994 between the test language and the proficiency level was reversed in 2003, regardless of the type of scale. Thus, in 2003, among persons outside Quebec whose mother tongue was French, 62% of those who did the test in French were unable to exceed Level 2 on the prose scale, compared to 52% of those who did it in English. The corollary of this result is that 48% of Francophones who did the test in English ranked at least at Level 3 compared to 38% of those who did the test in French. On the combined prose and document scale, the gap was 11 percentage points, with 64% of Francophones who did the test in French not reaching Level 3, compared to 53% of those who did the test in English. An analysis by age cohort shows that there is no clear statistical relationship between the age of Francophones outside Quebec and the language in which they chose to be evaluated.

Table 6

Distribution of literacy levels on combined prose and document scale by language of test, Francophones aged 16 and over, Canada excluding Quebec, 2003

Language of test	Level 1	Standard error	Level 2	Standard error	Level 3	Standard error	Level 4 and 5	Standard error
Total	**25.5**	**(1.3)**	**30.9**	**(1.3)**	**31.4**	**(1.2)**	**12.2**	**(1.3)**
French	30.7	(1.8)	32.9	(1.7)	26.5	(1.4)	9.8	(1.1)
English	22.8	(1.5)	29.8	(1.7)	34.0	(1.7)	13.4	(2.0)

Among Francophones outside Quebec who did the test in English (66%), 61% stated that they spoke English most often at home. Their performance on the test proved to be significantly higher than that of Francophones for whom French was the language most often spoken at home, especially at the two ends of the scale. Nearly 30% of Francophones speaking French most often at home ranked at Level 1 on the prose scale, compared to just under 18% of those for whom English was the main language at home. At the other end of the scale, 10% of Francophones speaking French most often at home ranked at least at Level 4, compared to 16% of those most often speaking English. Once again, this association between the language commonly used at home and performance is observed even when we control for the effect of age on performance.

Table 7

Distribution of literacy levels on prose scale by language spoken most often at home, Francophones aged 16 and over, Canada excluding Quebec, 2003

Language spoken at home	Level 1	Standard error	Level 2	Standard error	Level 3	Standard error	Level 4 and 5	Standard error
Total	**24.5**	**1.3**	**30.8**	**1.2**	**32.0**	**1.5**	**12.7**	**1.3**
French	29.4	1.7	31.5	1.4	28.7	1.6	10.4	1.1
English	17.7	2.0	30.0	2.4	36.2	3.0	16.1	2.3

These results are corroborated by census statistics on language spoken most often at home and highest level of schooling. These show that indeed, a larger proportion of Francophones who speak French most often at home have not completed grade 9 when compared to Francophones who speak English most often. But census statistics show that on the other hand, a larger proportion of those who speak French most often at home have university degrees. However, among persons with post-secondary education in general, persons who speak French most often at home are in a less favourable situation in this regard.

Table 8

Highest level of schooling by language spoken most often at home, persons with French as their mother tongue, New Brunswick, Ontario, Manitoba and Canada excluding Quebec, 2001

	Less than Grade 9	Grades 9 to 11, including high school diploma	Post-secondary education without degree	University degree
New Brunswick				
French	23	38	29	10
English	18	40	34	9
Ontario				
French	14	40	30	16
English	10	39	38	13
Manitoba				
French	17	36	30	17
English	12	42	37	9
Canada excluding Quebec				
French	18	38	29	10
English	12	42	37	9

The IALSS data also show that when education level and age are held constant for Francophones outside Quebec as a group, those who speak French most often at home are 1.8 time more likely to rank at Level 1 or 2 than those who speak English most often at home.[14] Also, for a given level of schooling and a given age group, Francophones outside Quebec who did the test in French are 2.1 times more likely to rank at the first two levels on the prose scale than those who did the test in English.

These disparities between francophones whose main home language is French and those who use English most often are mostly attributed to the fact that they live in Ontario rather than in New Brunswick and that they live in an urban rather than a rural environment. We must keep in mind that when only the Ontario data are examined, the influence of the language spoken at home ceases being statistically significant as soon as we isolate the influence of the living environment. Thus, it is not necessarily the fact of speaking English at home that appears to give an advantage to Francophones, but rather the fact that about 60% of Franco-Ontarians who live in an urban environment of more than 10 000 inhabitants are more educated than those who live in a rural environment. In effect, they display a higher rate of university diplomas (20%) than those who live in a rural environment or in an urban environment of less than 10 000 inhabitants (11% in both cases). Furthermore, while 48% of Franco-Ontarians living in urban areas of more than 10 000 inhabitants speak English most often at home, this proportion is 31% among those living in rural environments and 35% for those living in urban areas of less than 10 000 inhabitants.

In fact, when we exclude the data involving New Brunswick from the analysis of the results concerning the Francophones outside of Quebec, it stands out that as soon as we isolate the influence of age and of the living environment (rural vs. urban), speaking English more than French at home does not translate into a different probability of performing at level 1 or at level 2 on the prose scale.

6.2 Language of schooling

The 2003 IALSS survey includes questions on the main language of instruction at the elementary level and the secondary level. The results reveal, firstly, that the vast majority of New Brunswick Francophones received their elementary and secondary education in French. Similarly, approximately 83% of Ontario Francophones received their elementary education in French and 7% in French and English. As might be expected, the proportion is lower for secondary education (65% in French and 8% in French and English). As regards Manitoba, the brief historical overview provided at the beginning of the study clearly showed that many Francophones in that province were unable to have access to education in their mother tongue. The IALSS findings show that only 42% of Francophones received their elementary education in French and 18% received it in both languages. At the secondary level, only 32% of Francophones received their education in French while 18% did so in both languages. The question that arises is therefore the following: does the language of instruction at the secondary level have an influence on the language chosen to take the IALSS test? Also, does the language of instruction have an influence on the results obtained in the tests? Of course, the main language in which secondary education was received is not in itself decisive, but it may have had an influence on the choice of the language in which the person feels most at ease.

Statistics from the IALSS survey indicate that among Francophones outside Quebec, 95% of those who received their secondary education in English chose to take the survey test in English. Of those who did their studies in French, nearly half nevertheless chose to be tested in English. Lastly, among the roughly 75,000 Francophones who received their secondary education in both languages, 89% chose to take the test in English. There is little variation among provinces in the choice of the language of testing among Francophones who did their secondary studies in English. Rather, it is among those who did those studies in French that environment appears to have the

greatest influence. Thus, in New Brunswick, 29% of individuals who did their secondary studies in French chose English as the language of testing, compared to 50% in Ontario and 77% in Manitoba.

Table 9

Language spoken at home and language of instruction of persons with French as their mother tongue, Canada excluding Quebec, New Brunswick, Ontario and Manitoba, IALSS, 2003

	Canada excluding Quebec	Standard error	New Brunswick	Standard error	Ontario	Standard error	Manitoba	Standard error
Language spoken most often at home at age of attending elementary school								
French	89.4	(0.9)	95.4	(1.7)	91.2	(0.7)	85.3	(1.9)
French and English	3.8	(0.5)	2.7	(1.4)	3.3	(0.4)	6.1	(1.1)
English	6.5	(0.7)	1.8	(0.6)	5.1	(0.6)	8.1	(1.3)
Main language of instruction at elementary school								
French	73.1	(1.5)	90.2	(1.2)	83.2	(0.7)	42.0	(2.5)
French and English	7.7	(0.7)	2.7	(0.6)	6.7	(0.4)	17.5	(2.0)
English	19.1	(1.6)	7.1	(1.1)	10.0	(0.7)	40.5	(3.2)
Main language of instruction at secondary school								
French	59.5	(1.9)	87.3	(1.9)	64.5	(1.2)	32.1	(2.4)
French and English	8.5	(0.7)	2.4	(0.6)	8.3	(0.5)	17.9	(2.2)
English	30.3	(1.9)	10.1	(1.8)	24.6	(1.2)	49.5	(3.2)

The results of the survey show that whether one has done one's secondary studies in English or French does not affect the outcome of the test. If the association with the language spoken most often at home is taken into account, the result is the same as described above, namely that Francophones who speak English most often at home, regardless of whether they attended school in French or English, do better in the tests than those who speak French most often at home, all languages of instruction combined.

6.3 Province of schooling

The IALSS results show that of the 614,000 Anglophones who reported being born in Quebec, 52% were residing outside Quebec at the time of the survey. By comparison, of the 4.8 million Francophones who reported being born in Quebec, 3.6% (172,000) of them were residing outside Quebec at the time of the survey. Finally, of the approximately 887,000 Francophones who were living outside Quebec at the time of the survey, 19% of them were born in Quebec.

Among Ontario Francophones, 27% stated that they were born in Quebec and 67% in Ontario. Overall, there was no significant difference in the results obtained between Franco-Ontarians born in Quebec and those born in Ontario, except for a gap of 5 percentage points in favour of persons born in Quebec at the highest level of the scale. However, when we look at the performance of those under 45 years of age who did their secondary studies in Ontario and those who did them in Quebec, we observe a sizable gap in favour of the latter both at the bottom of the scale and at the highest level of the scale for prose and document literacy combined. The reason for this gap is simple: 30% of Francophones who did their secondary studies in Quebec have a university degree and 27% have post-secondary education without a university degree. The corresponding proportions among those who did their secondary studies in Ontario are 16% and 20% respectively. The higher results for Franco-Ontarians who did their secondary studies in

Quebec are mainly due to young Quebecers migrating to Ontario for job purposes. It is worth noting that the performance of these Francophones in the test is comparable to that of Ontario Anglophones and Quebec Anglophones in the same age group.

Table 10

Level attained on combined prose and document scale, by location of secondary education, Ontario Francophones under 45 years of age, 2003

Province of secondary education	Level 1	Standard error	Level 2	Standard error	Level 3	Standard error	Level 4 and 5	Standard error
Quebec	5.5	(2.4)	25.1	(4.6)	42.2	(4.5)	27.2	(5.3)
Ontario	11.7	(1.8)	29.1	(2.6)	40.1	(2.5)	18.2	(2.1)

Source: IALSS, 2003.

7. Literacy and daily life

Considering the fact that literacy skills and abilities are not static and may grow or diminish over a lifetime, the development of literacy and the maintenance of literacy skills are closely linked with individuals' reading and writing habits as practised in their work or in their daily activities within or outside the home. The IALSS collected information on the use of libraries, visits to bookstores, the frequency of television viewing, the frequency of reading newspapers, magazines, journals and books and the frequency of using or reading letters, notes or e-mails by individuals. The survey also collected information on the frequency of using, reading or writing different types of documents as part of one's main job. It also included questions on the performance of numeracy tasks performed as part of that job. We will begin by presenting the statistical results for reading- and writing-related activities carried out as part of daily life outside work.

7.1 Use of a library

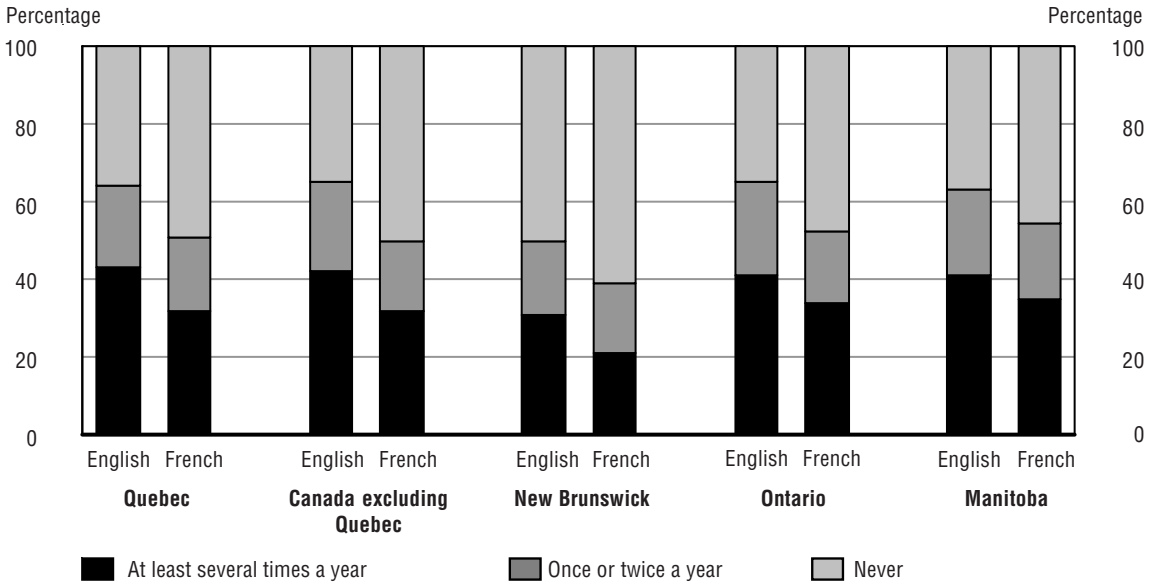
The statistics on library use are not necessarily an indicator for establishing a link between this practice and the possession of literacy skills. There may be various reasons why a person might not use a library, including the unavailability of a library close to home with books satisfying the person's preferences in the language of his/her choice, the variety of books offered or a preference for bookstores rather than libraries. But in any event, the survey results reveal differences in habits between Francophones of the different provinces and between Canada's Francophones and Anglophones.

In Canada as a whole, the survey results show that Anglophones are more likely to use a library than Francophones. Thus, 42% of the former indicate using the services of a library at least several times during the year, compared to 32% for the latter. Also, 35% of Anglophones state that they never use the services of a library, compared to nearly one person in two (49%) for Francophones. Quebec Anglophones exhibit behaviour quite similar to that of Anglophones of the other provinces, with the only exception being New Brunswick. In that province, just over one Anglophone in two reports never using a library, while for Francophones the proportion jumps to 61%.

The living environment partly explains the gaps found between Francophones of New-Brunswick and those in other provinces. Thus, although New-Brunswick Francophones who live in a rural environment indicate they go to a library less often than Francophones in other provinces, no significant difference was found among those living in urban areas.

Chart 12

Visiting a library by mother tongue and region, IALSS, 2003

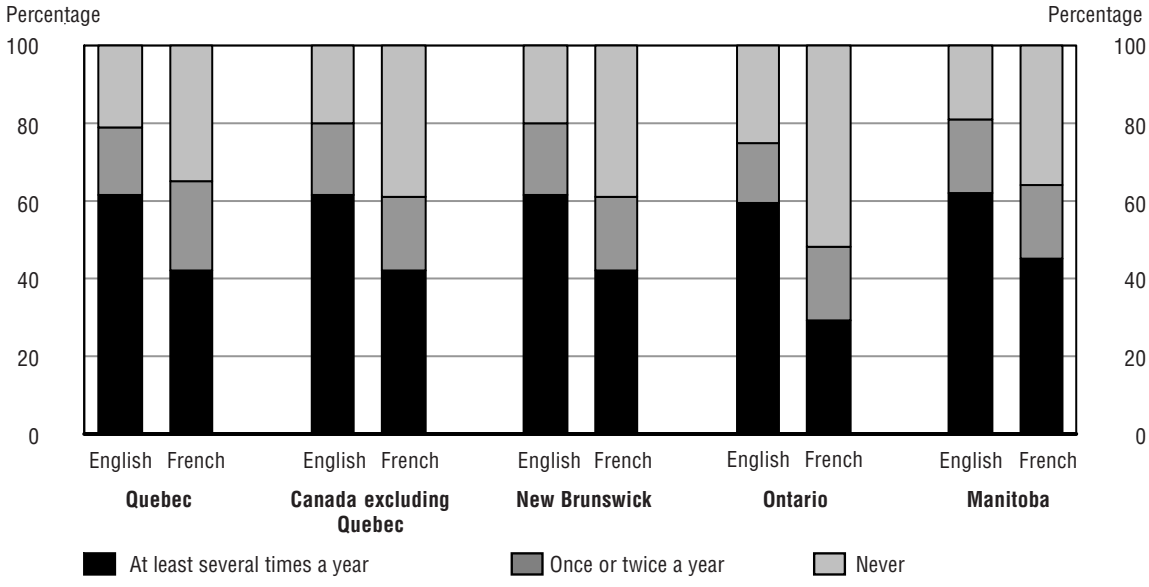


7.2 Visiting a bookstore

Visiting a bookstore, although more common than using a library, nevertheless exhibits a similar pattern. The proportion of Anglophones in Canada who report visiting a bookstore at least several times during the year is much higher than that of Francophones, at 62% compared to 42%. The gap between Francophones and Anglophones is widest in New Brunswick, where it reaches 30 percentage points. A comparison among Francophones in the various provinces reveals that more than one Francophone in two in New Brunswick (52%) never visits a bookstore, compared to just under 35% in the other provinces.

Chart 13

Frequency of visiting a bookstore by mother tongue and region, IALSS, 2003



7.3 Reading various documents

Newspapers

Reading newspapers, magazines, books and letters or e-mails is an important way to maintain or improve one's reading and writing skills. The survey data show that very few Canadian rarely or never read newspapers. In fact, nearly 80% of both Anglophone and Francophone Quebecers state that they read newspapers at least once a week. Outside Quebec, a slightly higher proportion of Francophones (19%) than of Anglophones (16%) state that they rarely or never read newspapers. The same data reveal that there is very little variation in newspaper reading among provinces, but in New Brunswick a slightly smaller proportion (71%) of Francophones state that they read newspapers at least once a week.

Magazines or articles

Also, a smaller proportion of Francophones than of Anglophones read magazines or articles. Outside Quebec, 58% of Anglophones report reading newspapers or articles at least once a week, compared to 48% of Francophones. Quebec stands out from the other provinces, with nearly 65% of its Anglophone population reporting that they read magazines at least once a week, as do 55% of Francophones.

Reading letters, notes or e-mails

There is also a gap between the language groups with respect to letter, note and e-mail reading habits. One Francophone in two outside Quebec reports engaging in such reading at least once a week compared to 60% of Anglophones. Again, a smaller proportion of Francophones in New Brunswick engage in this type of reading, at 43%, than is the case with Francophones in the other provinces.

Reading books

Lastly, reading books appears to be the least widespread activity, and also the activity which exhibits the widest gap between the language groups. Both in Quebec and in the other provinces as a group, nearly one Anglophone in two reports reading books at least once a week. Among Francophones, 35% reports this reading habit. Among the provinces for which there was oversampling of official language minorities, New Brunswick is the province in which the reading of books is least widespread, with only 29% of Francophones reporting that they engage in it at least once a week. In fact, while just under 33% of Canada's Anglophones report never or rarely reading books, the corresponding figure for Francophones is almost 50%. In New Brunswick, this lack of contact with books is the lot of nearly 60% of the Francophone population.

The IALSS also asked respondents who said they read books the language in which they read them. Only 23% of Francophones outside of Quebec who read books said they often read in French, whereas nearly 60% said they never or rarely read books in French. The proportions of Francophones saying they often read books in French were 42%, 24% and 17% in Brunswick, Ontario and Manitoba respectively.

Table 11a

Reading of newspapers by mother tongue, according to province/region, 2003

Mother tongue	At least once a week		Less than once a week		Rarely		Never	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Quebec								
English	79	(2.1)	9	(1.4)	7	(1.2)	5	(1.1)
French	79	(0.8)	7	(7.2)	9	(0.6)	6	(0.5)
Canada without Quebec								
English	77	(1.0)	7	(0.6)	9	(9.1)	7	(0.5)
French	74	(1.4)	7	(0.9)	10	(10.4)	9	(0.5)
New Brunswick								
English	76	(2.8)	7	(1.6)	8	(1.7)	8	(1.7)
French	71	(1.7)	9	(1.2)	11	(1.0)	10	(1.4)
Ontario								
English	77	(1.7)	7	(1.0)	10	(1.3)	7	(0.8)
French	75	(0.7)	6	(0.5)	11	(0.6)	8	(0.5)
Manitoba								
English	80	(1.3)	7	(0.9)	8	(0.9)	5	(0.7)
French	75	(3.0)	6	(1.2)	9	(1.3)	10	(2.9)

* Indicates that the gap between francophones and anglophones is significant at the alpha level of .05

Source: IALSS, 2003.

Table 11b

Reading of magazines or articles by mother tongue, according to province/region, 2003

Mother tongue	At least once a week		Less than once a week		Rarely		Never	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Quebec								
English	64*	(2.5)	20	(2.1)	12*	(1.5)	4*	(0.8)
French	55*	(1.1)	20	(0.8)	15*	(1.0)	10*	(0.9)
Canada excluding Quebec								
English	58*	(1.0)	21	(0.8)	15*	(0.7)	7*	(0.4)
French	48*	(1.2)	19	(1.0)	18*	(1.1)	14*	(1.1)
New Brunswick								
English	52	(2.6)	22	(2.7)	15*	(2.3)	11	(1.9)
French	47	(1.7)	17	(1.6)	21*	(1.8)	16	(1.5)
Ontario								
English	59*	(1.7)	20	(1.3)	15*	(1.3)	6	(0.8)
French	49*	(1.1)	20	(0.8)	19*	(0.9)	12	(0.8)
Manitoba								
English	56*	(1.9)	22	(1.3)	15	(1.4)	7	(0.8)
French	45*	(2.6)	25	(2.9)	19	(2.0)	11	(1.6)

* Indicates that the gap between francophones and anglophones is significant at the alpha level of .05

Source: IALSS, 2003.

Table 11c

Reading or use of letters, notes or e-mails by mother tongue, according to province/region, 2003

	At least once a week		Less than once a week		Rarely		Never	
Mother tongue	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Quebec								
English	60*	(2,4)	9	(1,5)	17*	(2,1)	15*	(2,2)
French	52*	(0,9)	9	(0,7)	11*	(0,8)	28*	(1,4)
Canada excluding Quebec								
English	60*	(0.6)	12	(0.6)	14	(0.5)	14*	(0.6)
French	50*	(1.5)	12	(1.2)	16	(1.2)	22*	(0.9)
New Brunswick								
English	52*	(3.0)	12	(2.1)	19	(2.3)	17*	(1.9)
French	43*	(1.9)	11	(1.2)	18	(1.3)	27*	(1.7)
Ontario								
English	60*	(1.2)	12*	(1.2)	13	(0.9)	15*	(1.0)
French	53*	(1.1)	10*	(0.7)	14	(0.7)	24*	(0.9)
Manitoba								
English	54	(1.7)	15	(1.3)	17*	(1.3)	14*	(1.0)
French	51	(2.6)	11	(1.6)	12*	(1.8)	26*	(2.7)

* Indicates that the gap between francophones and anglophones is significant at the alpha level of .05

Source: IALSS, 2003.

Table 11d

Reading of books by mother tongue, according to province/region, 2003

	At least once a week		Less than once a week		Rarely		Never	
Mother tongue	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Quebec								
English	49*	(2.5)	19	(2.6)	20*	(1.4)	12*	(1.2)
French	35*	(0.9)	16	(0.7)	26*	(0.8)	23*	(1.2)
Canada excluding Quebec								
English	51*	(0.9)	16	(0.8)	20*	(0.9)	13*	(0.7)
French	36*	(1.4)	14	(1.3)	23*	(1.2)	27*	(1.1)
New Brunswick								
English	44*	(2.4)	17*	(2.3)	21	(2.5)	19*	(2.4)
French	29*	(2.0)	12*	(1.1)	26	(1.8)	33*	(1.6)
Ontario								
English	53	*(1.5)	15	(1.4)	19	(1.8)	13*	(1.3)
French	37	*(1.1)	14	(0.9)	22	(0.8)	26*	(0.9)
Manitoba								
English	42	(1.9)	20	(1.3)	24	(1.8)	15*	(1.2)
French	36	(2.7)	18	(3.3)	24	(2.2)	23*	(2.1)

* Indicates that the gap between francophones and anglophones is significant at the alpha level of .05

Source: IALSS, 2003.

As to newspaper reading, which was a quite widespread activity as noted above, the use of French is hardly more common in those provinces, except for New Brunswick. In that province, some 55% of Francophones stated they often read newspapers in French, compared to 23% and 18% of Francophones in Ontario and Manitoba respectively. Clearly, the availability of newspapers in French has a major influence on the language in which people read newspapers. In Quebec, only 6% of Francophones said they often read newspapers in English.[15]

7.4 Reading and writing habits and literacy skills

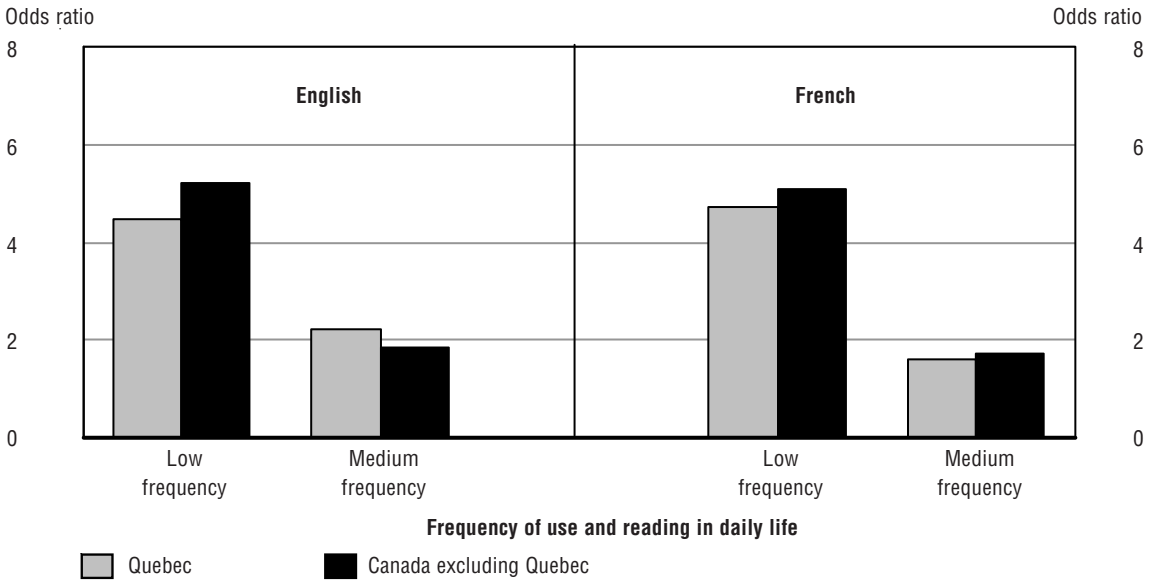
Numerous studies have shown that there is a close relationship between individuals' reading and writing habits in their daily life and their literacy level. This result is hardly surprising, and it suggests not only that sound reading habits influence individuals' literacy level but also that a high level of schooling is an indicator of sound reading habits acquired in the course of academic education. People who never read books or other types of written material are thus more likely to have a problematic relationship with the written word and, as a result, not do things that will maintain or improve their literacy skills.

Using information drawn from the four questions on individuals' habits with respect to reading newspapers, magazines, letters, notes or e-mails and books, we developed an indicator of reading and writing in everyday life outside of school and work. Based on the logistic regression technique, chart 14 shows that the likelihood of placing at the first two levels on the combined prose and document scale is approximately five times higher among persons with weak reading habits compared to those with a high frequency of reading various documents in their daily life. This link between reading practices and literacy is obvious when we look at the particular case of books. The statistics drawn from the survey show that outside Quebec, 62% of Anglophones ranking at Level 1 on the combined prose and document scale state that they never or rarely read books, compared to 15% of Anglophones ranking at Level 4/5. Among Francophones, it was instead 72% of individuals at Level 1 who stated that they never or rarely read books, compared to 25% of those at Level 4/5. On the other hand, 28% of Anglophones at Level 1 stated that they read books at least once a week compared to 67% of individuals at Level 4/5. Among Francophones, the corresponding percentages were 21% and 54% respectively.

Taking the reading of books as the only indicator, the survey results show that even adjusting for education and age, Anglophones are more likely to read books than Francophones are. Thus, both in Quebec and outside Quebec, the odds ratio reveals that even adjusting for a higher education level and age, Anglophones are 1.7 times more likely than Francophones to state that they read books at least once a week.

Chart 14

Odds ratios showing the probability[1] of placing at first two levels on combined prose and document scale by frequency of use or reading in daily life, Quebec and Canada excluding Quebec, 2003



1. High frequency is the benchmark category.

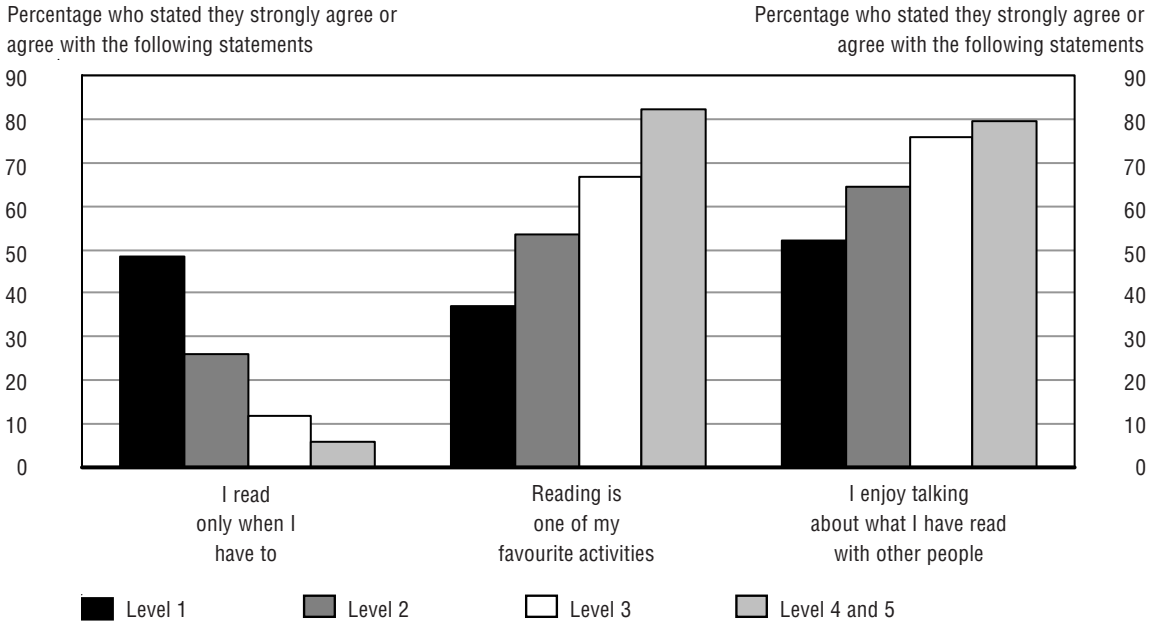
7.5 Attitudes toward reading

Individuals' attitudes toward reading are related to their reading practices, and also to their literacy level. Thus, as Chart 15 shows, persons who rank at Level 1 on the prose scale are proportionally more likely to say that they "strongly agree" or "agree" with the statement, "I read only when I have to" than those ranking at higher levels. Similarly, persons who rank at Level 1 on the prose scale are proportionally less likely that those at higher levels to say that they "strongly agree" or "agree" with the statement, "Reading is one of my favourite activities." The same is true for the statement, "I enjoy talking about what I have read with other people."

It is not surprising that attitudes toward reading, as well as reading and writing habits, are also linked to having books in the household. The survey results indeed bear out that individuals who agree with the statement, "Reading is one of my favourite activities" are much more likely to have more books in their household. Among Francophones outside Quebec, 12% of those who agree with this statement state that they have fewer than 25 books in their household, compared to 34% of persons who disagree with the statement. Among Quebec Anglophones, the corresponding proportions are 7% and 22% respectively.

Chart 15

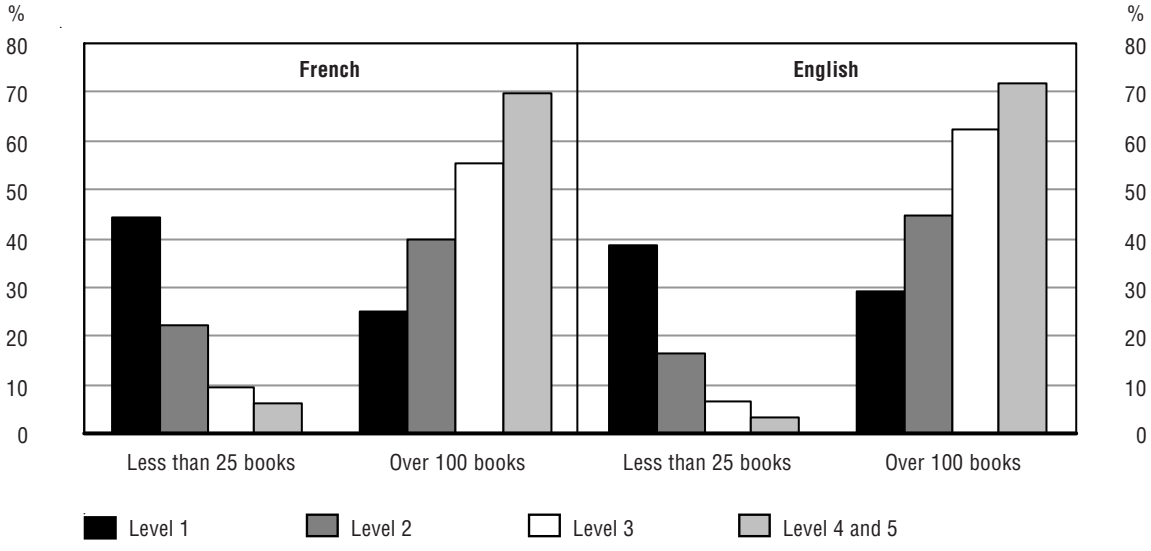
Attitudes toward reading by level on prose scale, Francophones outside Quebec, 2003



The number of books in the household is also related to the results obtained in the literacy tests. As may be seen from Chart 16, 44% of Francophones outside Quebec who are at Level 1 on the prose scale have fewer than 25 books in their household, whereas 25% state that they have over 100 books in their household. Among Francophones who rank at Level 4/5, only 6% state that they have fewer than 25 books in their household and 70% of them state that they have over 100 books. Among Anglophones, the results are of roughly the same order of magnitude.

Chart 16

Number of books in the household by proficiency level on prose scale, by mother tongue, Canada excluding Quebec, IALSS, 2003

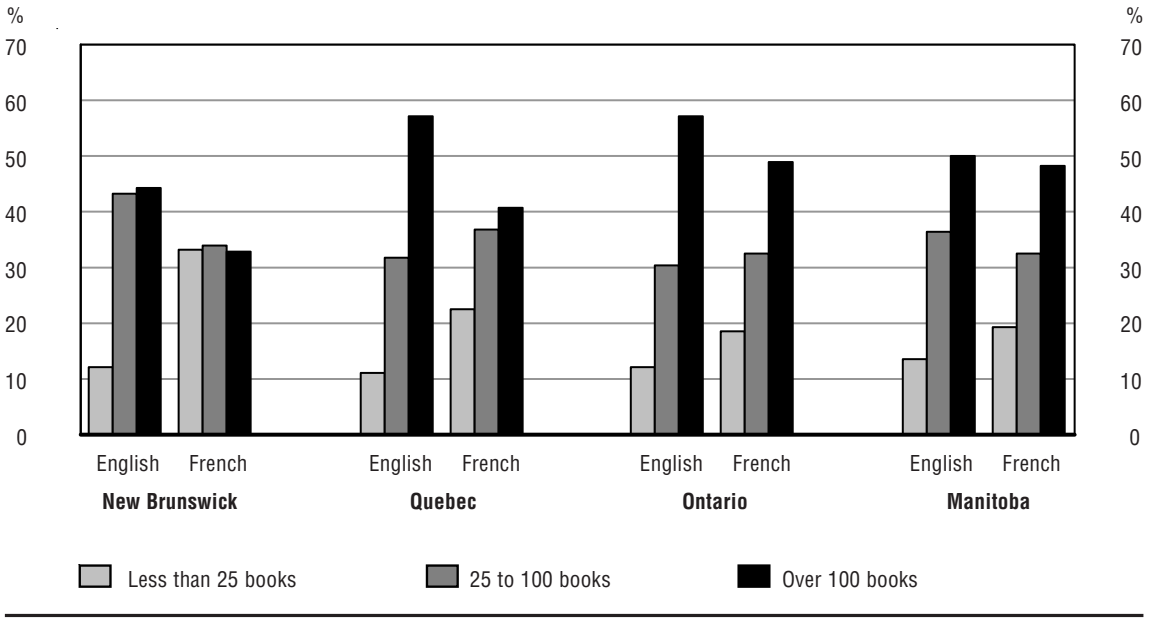


Major variations may also be observed from one province to another in the number of books owned by Francophones and Anglophones. The proportion of New Brunswick Francophones who report having fewer than 25 books in the household, at 33%, is the highest among the provinces studied. Among their fellow Francophones in the other provinces, the corresponding proportion is in the range of 20%. By contrast, Francophones in Ontario and Manitoba appear to have the most books in the household with proportions of 49% and 48% respectively. The gap between New Brunswick Anglophones and their counterparts in other provinces is also sizable, at least as regards the proportion of those who report having over 100 books in the household. Approximately 57% of Anglophones in Quebec and Ontario report this situation, compared to 44% in New Brunswick. The gap between the two language groups appears to be narrowest in Manitoba.

Although being more educated is associated with having more books in the household, the gap between Francophones and Anglophones remains even if the education level is held constant between the two groups. The results of the survey show indeed that regardless of their education level or income level, Anglophones' responses appear to indicate that a larger proportion of them have more than a hundred books in their household. However, one must keep in mind that having books at home is also related to the price of books, a not inconsiderable factor as many books in French are more expensive than their English equivalent.

Chart 17

Number of books in the household by mother tongue and province, IALSS, 2003



8. Participation in adult education and training[16]

8.1 Participation in formal education

Among the highlights of the international report on the IALSS (OECD and Statistics Canada, 2003: 82) is the fact that the participation rate in adult education and training rose substantially between 1994 and 2003. However, while this adult training has become "a central issue in national policies on education, economy and welfare," and while the promotion of lifelong education and training is increasingly finding its way onto the political and social programs of the governments of Western countries, a large proportion of adults with low basic skills still do not have access to structured forms of adult education and training.

In Canada as a whole, participation in adult training and education is less widespread among Francophones than among Anglophones. Just over 54% of Anglophones report taking such training, compared to slightly under 43% of Francophones.[17] However, outside Ontario, there is little or no gap between Francophones and Anglophones. Furthermore, in the specific case of New Brunswick, the gap observed between the two language groups is not statistically significant according to the survey data. For purposes of comparing the results for Francophones in the various parts of Canada, the survey results show that the proportion of Ontario Francophones participating in adult education and training (47%) is larger than the proportion of Francophones in New Brunswick (40 %) and Quebec (43 %) who do so.

When respondents are asked whether, in the last twelve months, they took any courses as part of a program of studies toward a certificate, diploma or degree,[18] the proportions are much lower. Thus, more than 17% of Canada's Anglophones report having registered in such a program of studies compared to 12% of Francophones. The gap between Francophones and Anglophones is significant for all provinces outside Quebec as well as for Quebec. The latter province is the only one in which a smaller proportion of Anglophones than of Francophones are registered in a program of studies, and it is also the province with the largest gap between the groups. This situation is probably due in part to the fact that among Canada's Anglophones, it is those in Quebec who are proportionally the most numerous in reporting that they have a university degree, at 32% compared to 17% for Francophones. In the rest of Canada, 21% of Anglophones and 17% of Francophones stated that they held such a degree. Considering the pressures in the job market regarding the value assigned to a university degree, it seems likely that the distinct academic profile of Quebec Anglophones makes them proportionally less likely to register for programs of studies toward a certificate, diploma or degree. The survey results show that indeed, among those who registered for a course as part of a program of studies, 45% of Quebec Anglophones registered for a postsecondary education program below the bachelor's level, compared to 64% of Quebec Francophones. Outside Quebec, the proportions for Anglophones and Francophones are respectively 75% and 77%.

Finally, Anglophones Canada-wide are also more likely than Francophones to report having registered for a course that was not part of a program of studies, at 28% compared to 22%. At the provincial level, the results observed do not show significant differences between the two language groups. However, interprovincial comparisons between Francophones show that those in New Brunswick are proportionally less numerous (18%) than those in Quebec (25%) or Ontario (23%) in registering for such a course.

Table 12

Rate of participation in adult education and training by mother tongue, by type of participation and province, 2003

	New Brunswick		Quebec		Ontario		Manitoba		Canada excluding Quebec	
Type of participation	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Total participation										
French	39.5	(2.4)	43.0	(1.1)	46.7*	(1.5)	47.5	(2.7)	46.3*	(1.4)
English	45.9	(3.3)	42.5	(2.9)	54.1*	(1.6)	51.8	(2.0)	54.6*	(1.0)
Participation in a program										
French	11.1	(1.3)	11.6*	(0.7)	14.8	(1.0)	17.1	(3.2)	14.3*	(1.0)
English	13.4	(2.2)	7.5*	(1.4)	17.0	(1.5)	18.1	(1.4)	17.7*	(0.9)
Participation in a course										
French	17.9	(1.7)	24.8	(0.9)	22.9	(1.3)	22.2	(2.7)	22.3*	(1.6)
English	20.0	(3.3)	25.4	(2.9)	26.1	(1.4)	24.7	(1.8)	28.4*	(0.9)

* Difference between francophones and anglophones is significant at the alpha level of .05

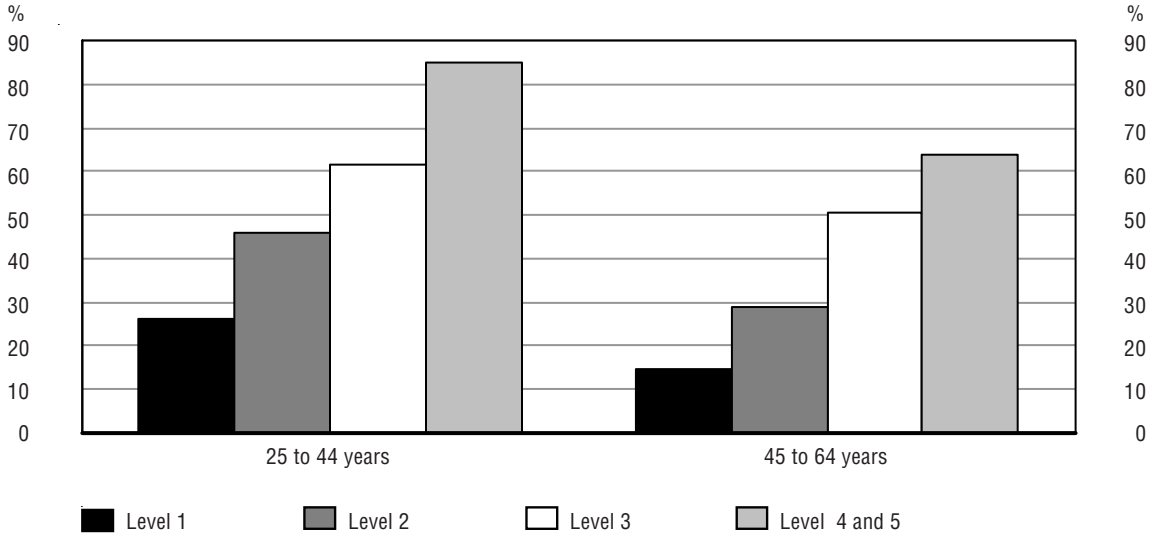
Source: IALSS, 2003.

It can be assumed that the higher an individual's proficiency level on the literacy scale, the more he/she will tend to participate in adult education and training. Also, the older the individual, the lesser the tendency to participate. This is what may be observed from the survey results. Thus, among Francophones aged 25 to 44 outside Quebec, 26% ranking at Level 1 reported having participated in adult education and training during the year preceding the survey, compared to 85% of Francophones ranking at Level 4/5. The same phenomenon is observed among those aged 45 to 65, for whom the corresponding proportions are 14% and 65% respectively.

However, it is appropriate to examine the link between the literacy level attained and the degree of participation in adult education and training by controlling for the effect of education, age, sex and employment status. Such an examination reveals that Francophones outside Quebec who rank at Level 4/5 on the combined prose and document scale are 5.7 times more likely to report having participated in adult education and training during the twelve months preceding the survey than those ranking at Level 1. Francophones ranking at Level 3 are 2.7 times more likely to have participated in such training than those ranking at Level 1, while persons ranking at Level 2 are 1.7 times more likely. A similar relationship is observed for Anglophones outside Quebec, although the relatively likelihood is lower for persons ranking at Level 4/5.

Chart 18

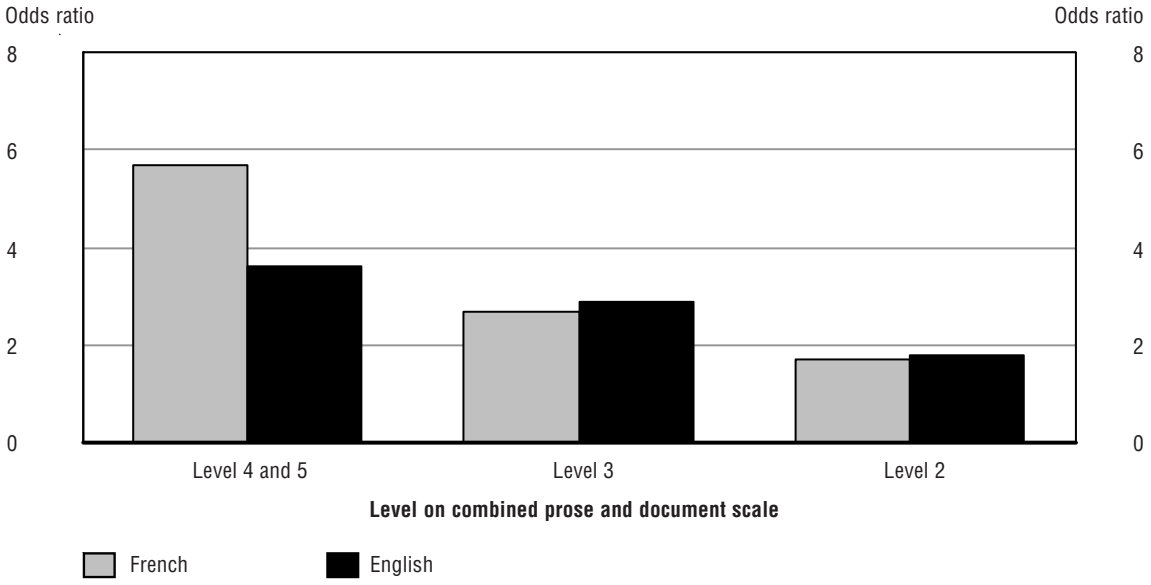
Proportion of Francophones outside Quebec who participated in adult education and training during the year preceding the survey by age group, according to level on combined prose and document scale, 2003



Source: EIACA, 2003.

Chart 19

Adjusted odds ratios showing, for adults aged 16 to 65, the probabitity of having participated in adult education and training, by literacy level and mother tongue, Canada excluding Quebec, 2003



1. Level 1 is the benchmark category. Odds ratios are adjusted for level of schooling, age, sex and employment status.
Source: EIACA, 2003.

8.2 Informal learning

Lifelong learning is not limited merely to formal education. It also includes various forms of informal education, structured or otherwise. Just as we saw with respect to participation in adult education and training, Francophones outside Quebec are generally less likely than Anglophones to report that they participated in informal learning during the twelve months preceding the survey.

Just as indicated in the international report and the Canadian report on the IALSS, we divided in two groups the various informal learning activities listed in the survey's basic questionnaire. Those activities carried out in contexts or during events that could be described as structured are designated as representing a structured mode of learning, whereas those that refer to independent learning, experimentation or learning through observation done either at home or in non-structured situations are designated as representing a non-structured mode of learning.[19] With respect to the structured learning mode, the questionnaire included the following activities:

a) Go on guided tours of museums, art galleries or other locations
b) Be sent around an organization to learn different aspects of that organization
c) Visit trade fairs, professional conferences or congresses
d) Attend short lectures, seminars, workshops or special talks that are not part of a course.

The differences between the language groups are sizable. For example, 36% of Quebec Anglophones report participating in guided tours, compared to 26% for Francophones. Few Quebec Francophones (13%) reported being sent around an organization to learn different aspects of it, while for Quebec Anglophones and for Francophones outside Quebec, the corresponding proportion is 23%. Outside Quebec, 28% of Anglophones reported having participated in such an activity. Lastly, Anglophones were also more likely to state that they had attended short lectures, seminars or workshops during the twelve months preceding the survey.

As regards activities associated with the non-structured mode of informal learning, the questionnaire included the following activities:

a) Read manuals, reference books, journals or other written materials but not as part of a course
b) Use computers or the Internet to learn but not as part of a course
c) Use video, television, tapes to learn but not as part of a course
d) Learn by watching, getting help from or advice from others but not from course instructors
e) Learn by yourself by trying things out, doing things for practice, trying different approaches to doing things.

Activities associated with the non-structure mode of informal learning are much more widespread inasmuch as they have a more universal connotation (Livingston, 1999; Statistics Canada, 2005, p. 87). Just as we saw for the results on activities associated with the structured mode of informal learning, activities associated with the non-structure mode are reported more frequently by Anglophones than by Francophones (see Table 13). Many of these activities can be carried out in daily life in the home environment. Considering the less universal nature of activities associated with the structured mode of learning, it is not surprising that they are less widespread and are more closely tied to various social and economic characteristics.

An additional point to be noted is that the data confirm the interprovincial disparities observed thus far, namely the low proportion of New Brunswick Francophones who reported having participated in informal learning activities and the sizable gap observed between the language groups in that province.

A logistic regression analysis of the survey results shows that by adjusting for sex, age, education level and labour market status, the likelihood of participating in structured activities is

nearly four times greater for individuals at Level 4/5 on the combined prose and document scale than for those at Level 1. Similarly, the likelihood of participating in such activities for persons at levels 3 and 2 is respectively close to three times and twice greater than for those at the lowest level. Those results are almost identical for both language groups.

Table 13

Participation in activities constituting structured and non-structured modes of informal learning by mother tongue, Quebec and Canada excluding Quebec, 2003

	Province - Region			
	Quebec		Canada excluding Quebec	
Informal learning	%	Standard error	%	Standard error
Structured mode				
Go on guided tours of museums, art galleries or other locations				
French	26*	(0.9)	24*	(1.3)
English	36*	(2.4)	33*	(1.0)
Be sent around an organization to learn different aspects of that organization				
French	13*	(0.6)	23*	(1.5)
English	23*	(2.5)	28*	(0.8)
Visit trade fairs, professional conferences or congresses				
French	33*	(1.1)	28*	(1.0)
English	32*	(3.0)	35*	(1.1)
Attend short lectures, seminars, workshops or special talks that were not part of a course				
French	33*	(0.9)	36*	(1.2)
English	42*	(3.3)	46*	(1.2)
Non-structured mode				
Read manuals, reference books, journals and other written materials but not as part of a course				
French	63*	(0.9)	65*	(1.4)
English	72*	(2.7)	69*	(1.0)
Use computers or the Internet to learn but not as part of a course				
French	50*	(1.2)	55*	(1.5)
English	69*	(2.4)	69*	(1.0)
Use video, television, tapes to learn but not as part of a course				
French	40*	(1.2)	46*	(1.9)
English	50*	(2.9)	52*	(1.3)
Learn by watching, getting help from or advice from others but not from course instructors				
French	71*	(1.4)	74*	(1.6)
English	81*	(1.7)	82*	(0.9)
Learn by yourself by trying things out, doing things for practice, trying different approaches to doing things				
French	83*	(0.9)	86*	(0.8)
English	91*	(1.6)	90*	(0.7)

* Difference between francophones and anglophones is significant at the alpha level of .05

Table 14

Rate of participation in structured and non-structured modes of informal learning by mother tongue and province/region, 2003

	Province - Region									
	New Brunswick		Quebec		Ontario		Manitoba		Canada excluding Quebec	
Informal learning	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Structured mode										
French	43*	(2.0)	53*	(1.0)	59*	(0.9)	66	(3.2)	57*	(1.4)
English	62*	(3.6)	66*	(2.7)	67*	(1.9)	70	(1.8)	69*	(1.1)
Non-structured mode										
French	80*	(2.0)	90*	(0.6)	92	(0.7)	96	(0.9)	91*	(0.7)
English	93*	(1.8)	95*	(1.1)	94	(1.1)	96	(0.9)	95*	(0.5)
Structured and non-structured mode										
French	42*	(2.1)	52*	(1.1)	59*	(1.0)	66	(3.3)	56*	(1.4)
English	61*	(3.5)	65*	(2.7)	67*	(1.9)	69	(1.9)	68*	(1.1)

* Difference between francophones and anglophones is significant at the alpha level of .05

9. Literacy and the labour market

9.1 Work-related literacy practices

Considering the fact that for most people, the labour market is a place where they spend a sizable part of their life, it can be assumed that the reading and writing activities that are carried on as part of their main job may serve to maintain and improve literacy skills. The IALSS asked individuals how often they use or read information contained in various types of documents as part of their main job, how often they write or fill out different documents and how often they carry out various numeracy activities.

Tables 15a, 15b and 15c show the results for various literacy and numeracy practices at work. The results reveal that the use of the written word at work is more widespread among Anglophones than among Francophones. In comparisons between Quebec and Canada excluding Quebec, it may be seen that the disparities between the language groups are mainly attributable to differences in the practices of Quebec Anglophones. The latter seem to stand out with respect to how often they carry out some literacy-related activities in their job. Larger proportions of them use or read memos or e-mails; read reports, articles or journals; and use or read diagrams and schematics. As to writing activities, Quebec Anglophones also stand out with respect to how often they write letters, memos or e-mails as part of their job. However, overall, the frequency of writing various documents at work is fairly similar for the two language groups. Lastly, it is worth noting that Francophones outside Quebec appear to be more likely to read or write manuals or reference books and read or write directions or instructions than their counterparts in Quebec.

With regard to numeracy-related activities, the survey results also show that overall, Anglophones are more likely to carry out these activities than Francophones, with the largest gaps concerning the frequency with which individuals "count or read numbers to keep track of things."

The interest of these results lies not only in the gaps that may exist between the language groups, but also in the link between these activities and the performance level in literacy and numeracy in the IALSS tests. It is also important to examine the link between these various literacy and numeracy practices and the type of job held. Clearly, some types of industries and some types of occupations are more conductive than others to the use of the written word in the workplace.

Table 15a

Frequency of using or reading information contained in various types of documents as part of main job, by mother tongue and region, 2003

	Quebec				Canada excluding Quebec			
	French		English		French		English	
Documents	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Letters, memos or e-mails								
At least once a week	67*	(1.1)	81*	(1.6)	70	(1.4)	73	(1.0)
Less than once a week	3	(0.4)	4	(1.0)	3*	(0.4)	5*	(0.4)
Rarely or never	30*	(1.0)	15	(1.4)	27*	(1.4)	23*	(1.0)
Total	**100**		**100**		**100**		**100**	
Reports, articles, magazines or journals								
At least once a week	56*	(1.1)	66	(1.9)	57	(1.6)	59	(1.0)
Less than once a week	9	(0.7)	9	(1.3)	8	(0.9)	10	(0.6)
Rarely or never	36*	(1.1)	25	(1.7)	35	(1.4)	32	(1.0)
Total	**100**		**100**		**100**		**100**	
Manuals or reference books								
At least once a week	47*	(1.1)	54*	(2.5)	54	(1.4)	55	(1.0)
Less than once a week	13	(0.9)	15	(1.6)	12*	(1.1)	16*	(0.8)
Rarely or never	39*	(1.2)	31*	(2.7)	35*	(1.4)	29*	(0.9)
Total	**100**		**100**		**100**		**100**	
Diagrams or schematics								
At least once a week	31*	(1.0)	41	(3.0)	34	(1.4)	35	(1.0)
Less than once a week	11	(0.6)	13	(1.9)	15	(1.3)	15	(0.6)
Rarely or never	58*	(1.0)	47*	(2.7)	51	(1.7)	50	(1.1)
Total	**100**		**100**		**100**		**100**	
Directions or instructions								
At least once a week	59	(1.2)	57	(2.9)	64	(1.4)	63	(1.0)
Less than once a week	11*	(0.8)	15*	(1.7)	11	(1.0)	13	(0.8)
Rarely or never	30	(1.1)	28	(2.4)	25	(1.2)	24	(1.0)
Total	**100**		**100**		**100**		**100**	
Bills, invoices, spreadsheets								
At least once a week	48	(1.4)	52	(2.8)	46	(1.3)	49	(0.9)
Less than once a week	8	(0.5)	10	(1.9)	11	(1.1)	10	(0.6)
Rarely or never	44	(1.4)	38	(2.9)	43	(1.3)	41	(1.0)
Total	**100**		**100**		**100**		**100**	

* Indicates that the gap between francophones and anglophones is signficant at the alpha level of .05

Source: IALSS, 2003.

Table 15b

Frequency of writing or filling out different documents as part of main job, by mother tongue and region, 2003

	Quebec				Canada excluding Quebec			
	French		English		French		English	
Documents	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Letters, memos or e-mails								
At least once a week	60*	(1.0)	69*	(2.4)	60	(1.7)	58	(1.3)
Less than once a week	6	(0.6)	8	(1.7)	6	(1.0)	8	(0.5)
Rarely or never	34*	(0.9)	24*	(1.9)	34	(1.6)	34	(1.3)
Total	**100**		**100**		**100**		**100**	
Reports, articles, magazines or journals								
At least once a week	37	(1.1)	40	(3.1)	40	(1.5)	37	(1.1)
Less than once a week	10	(0.7)	14	(2.0)	11	(1.1)	15*	(0.6)
Rarely or never	53*	(1.0)	46*	(2.9)	49	(1.4)	48	(1.2)
Total	**100**		**100**		**100**		**100**	
Manuals or reference books								
At least once a week	14	(0.8)	17	(2.4)	19*	(1.1)	14*	(0.8)
Less than once a week	7	(0.5)	8	(1.2)	9	(1.0)	10	(0.8)
Rarely or never	79	(0.9)	75	(2.8)	72*	(1.4)	76*	(1.2)
Total	**100**		**100**		**100**		**100**	
Directions or instructions								
At least once a week	34	(1.1)	35	(2.8)	41	(1.5)	42	(1.0)
Less than once a week	12*	(0.6)	15*	(1.7)	14	(1.3)	14	(0.6)
Rarely or never	55	(1.1)	50	(2.4)	46	(1.5)	44	(1.1)
Total	**100**		**100**		**100**		**100**	
Bills, invoices, spreadsheets								
At least once a week	38	(1.2)	37	(3.1)	36*	(1.4)	40*	(0.9)
Less than once a week	9	(0.7)	15	(2.2)	11	(1.0)	11	(0.5)
Rarely or never	53	(1.4)	49	(3.1)	53	(1.5)	50	(1.0)
Total	**100**		**100**		**100**		**100**	

* Indicates that the gap between francophones and anglophones is signficant at the alpha level of .05

Source: IALSS, 2003.

Table 15c

Frequency of performing various numeracy-related activities as part of main job, by mother tongue and region, 2003

	Quebec				Canada excluding Quebec			
	French		English		French		English	
Documents	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Measure or estimate the size or weight of objects								
At least once a week	35	(1.1)	34	(3.1)	40	(1.5)	42	(1.1)
Less than once a week	6	(0.5)	5	(1.1)	7	(0.8)	8	(0.5)
Rarely or never	59	(1.1)	61	(3.2)	40*	(1.5)	50*	(1.2)
Total	**100**		**100**		**100**		**100**	
Calculate prices, costs or budgets								
At least once a week	40	(1.0)	40	(2.8)	40*	(1.6)	44*	(1.1)
Less than once a week	8*	(0.5)	14*	(2.0)	11	(1.4)	11	(0.6)
Rarely or never	52*	(1.0)	46*	(2.8)	50*	(1.6)	45*	(0.9)
Total	**100**		**100**		**100**		**100**	
Count or read numbers to keep track of things								
At least once a week	56*	(1.3)	71*	(2.6)	67*	(1.6)	79*	(0.9)
Less than once a week	9	(0.8)	11	(1.6)	8	(0.7)	7	(0.5)
Rarely or never	36*	(1.2)	19*	(2.1)	25*	(1.4)	15*	(0.8)
Total	**100**		**100**		**100**		**100**	
Manage time or prepare timetables								
At least once a week	49*	(1.3)	55*	(2.3)	53*	(1.5)	59*	(1.1)
Less than once a week	8	(0.7)	11	(1.7)	7	(0.9)	8	(0.6)
Rarely or never	43*	(1.3)	34*	(2.4)	40*	(1.4)	33*	(0.9)
Total	**100**		**100**		**100**		**100**	
Give or follow directions or use maps or street directories								
At least once a week	33	(1.0)	35	(3.4)	39*	(1.3)	48*	(0.9)
Less than once a week	8	(0.6)	11	(1.9)	11	(1.1)	12	(0.7)
Rarely or never	60	(1.0)	54	(3.3)	50*	(1.5)	40*	(0.8)
Total	**100**		**100**		**100**		**100**	
Use statistical data to reach conclusions								
At least once a week	18*	(0.7)	24*	(2.7)	22*	(1.3)	28*	(1.0)
Less than once a week	11	(0.8)	12	(1.8)	16	(1.7)	16	(0.7)
Rarely or never	71*	(1.1)	64*	(3.2)	63*	(1.6)	56*	(1.1)
Total	**100**		**100**		**100**		**100**	

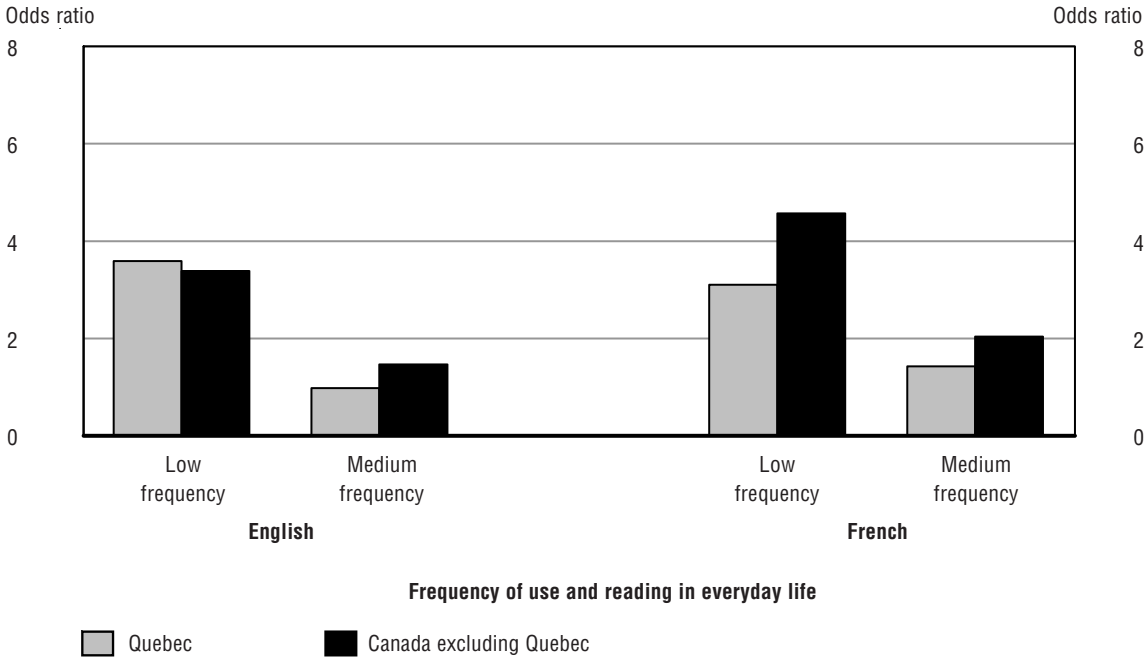
* Indicates that the gap between francophones and anglophones is signficant at the alpha level of .05

Source: IALSS, 2003.

The survey results confirm the expected link between literacy level and frequency of use of the written word at work. Thus, the less an individual engages in writing-related activities at work, the higher the risk of placing at Level 1 or 2 on the combined prose and document scale. Among Francophones aged 65 and under who live outside Quebec, those who make limited use of the written word at work are nearly five times more likely to rank at the first two levels than those whose frequency of engaging in these practices is high. Among Quebec Francophones, the odds ratio is three to one for those who make low use of the written word relatively to those who make high use, while for those who make medium use this ratio is two to one. Among Anglophones, both in Quebec and outside that province, a relationship of the same order of magnitude is observed, the only exception being that there is no significant difference between Anglo-Quebecers who make medium use and those who make low use of the written word. It is worth noting that when we control for education level, age and sex, the relationship between use of the written word at work and performance level in literacy is still significant, although weaker. Thus, outside Quebec, the likelihood of placing at Level 1 or 2 is twice higher for Anglophones who make low use of the written word whereas for Francophones, this likelihood is three times higher. No significant difference is observed in this regard between those who make medium use of the written word at work and those who make high use. In Quebec, once we control for the influence of these variables, no significant difference remains for Anglophones, while for Francophones, only those who make low use of the written word are nearly twice as likely to rank at Level 1 or 2 as those who make high use.

Chart 20

Odds ratios[1] showing the probability of placing at first two levels on combined prose and document scale by frequency of use, reading or writing of selected documents at work, persons 65 and under, 2003



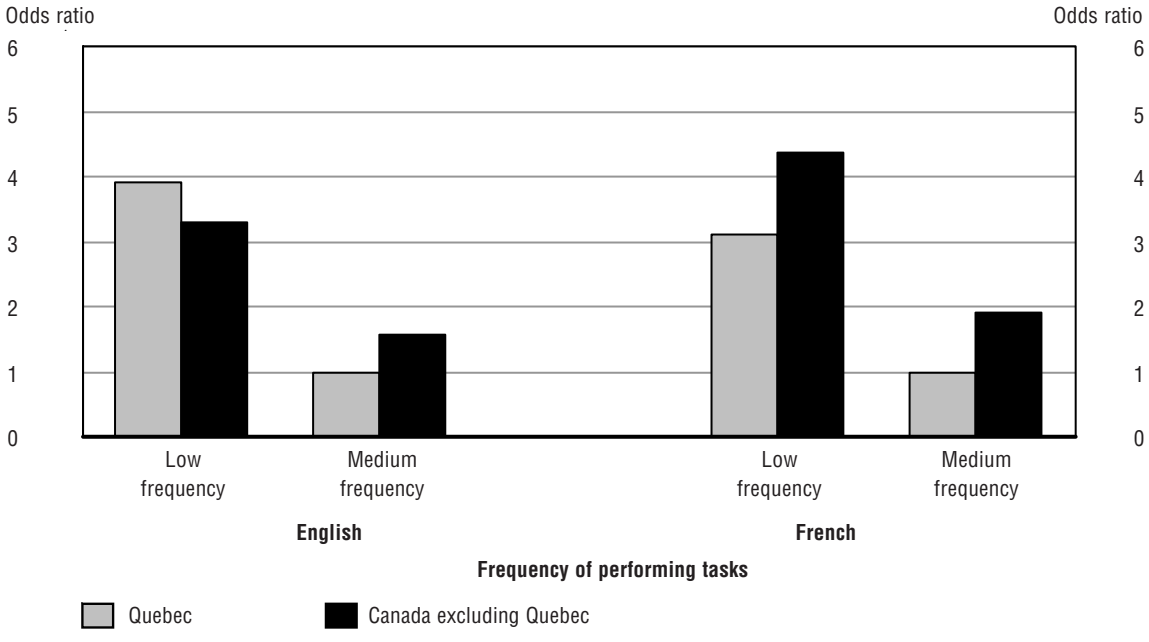
1. The benchmark category is high frequency.

Note: Odds ratios not significant at alpha level .05 have the value 1.

The performance of numeracy-related tasks as part of the main job is also associated with differences in performance on the numeracy scale. Just as we saw in the case of literacy practices at work, those who perform very few numeracy-related tasks are also more likely to place at Level 1 or 2. The likelihood of placing at these levels are of the same order of magnitude as those for the performance of literacy tasks. Furthermore, a decrease in the odds ratio is again observed when the influence of education, age and sex is taken into account. For Anglo-Quebecers, no significant difference subsists between the degree of use of numeracy at work and the level attained on the numeracy scale in the IALSS tests. For Francophones outside Quebec, those who perform very few numeracy-related tasks are again nearly three times more likely not to attain Level 3 than those who make substantial use of numeracy at work.

Chart 21

Odds ratios showing the probability[1] of placing at first two levels on numeracy scale by frequency of performing numeracy-related tasks at work, by mother tongue, persons 65 and under, 2003

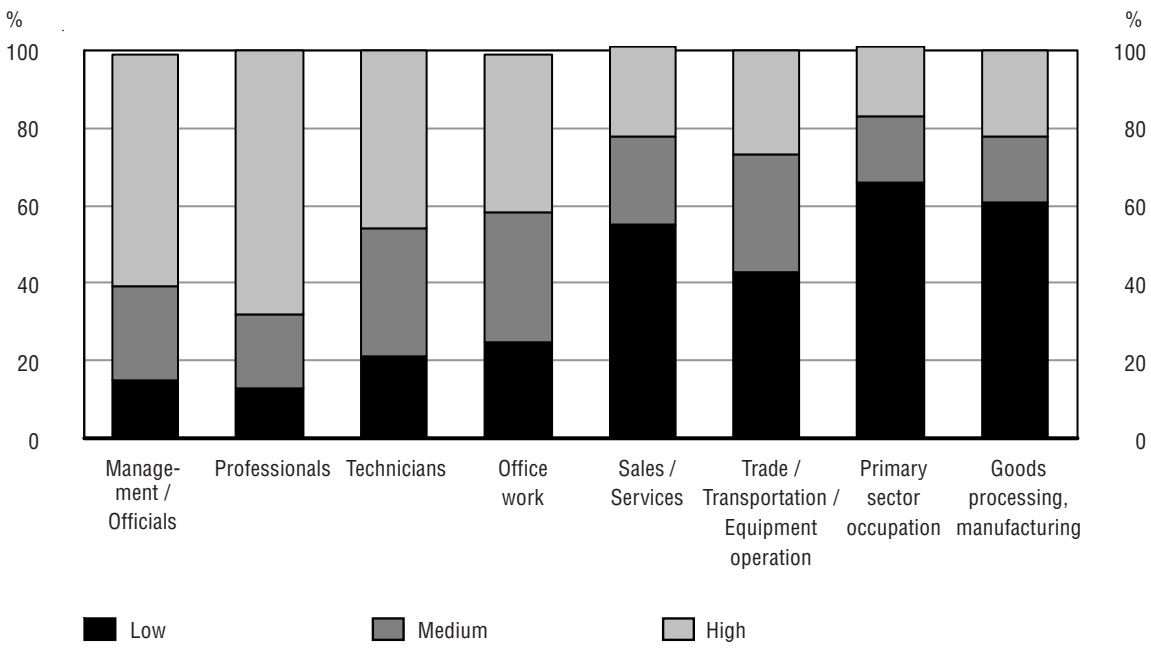


1. The benchmark category is the low frequency.

The use of the written word, either in reading or in writing, as part of one's main job is closely related to the type of work performed. It may be expected, then, that a person who has a job in the field of transportation, equipment operation or goods processing and manufacturing will be less likely to make use of the written word in his/her job than a person working as a professional or a manager. Taking as a test case the distribution of the frequency of use of written materials at work among the Francophone population living outside Quebec,[20] we observe that indeed, professionals (65%) and managers (56%) are those reporting the greatest use of the written word as part of their main job, whereas the corresponding proportion is much lower for workers in sales and services (23%), those in primary sector occupations (17%) or those engaged in goods processing and manufacturing (20%). Most workers engaged in the latter types of employment report making low use of written materials at work.

Chart 22

Use of written word as part of main job by major occupational category, prose scale, Francophones outside Quebec, 2003



9.2 Occupation and literacy performance level

Having observed that the use of written material is related to both the type of occupation and the level of performance in literacy tests, we can assume that the proportion of workers in the different employment sectors will vary within the different literacy levels. And indeed, the survey results confirm that Francophone workers outside Quebec who are employed as professionals, for example, account for the largest proportion of workers at Level 4/5 on the prose scale, whereas those in jobs related to trade, transportation or equipment operation constitute the largest proportion of those ranking at Level 1 on the same scale. Thus, 23% of individuals ranking at Level 4/5 are professionals and 14% are managers. Of the individuals ranking at Level 1, 2% are professionals and 6% are managers. On the other hand, jobs related to trade, transportation or equipment operation as well as those related to the primary sector and those related to goods processing and manufacturing account for more than half (51%) of jobs held by persons ranking at Level 1 compared to 13% of those ranking at Level 4/5.

Table 16

Distribution of major categories of occupations within each literacy level on prose scale, Francophones outside Quebec, 2003

Occupations	Level 1		Level 2		Level 3		Level 4/5	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Management / Officials	5.6	2.9	9.9	2.2	12.1	1.8	20.4	3.0
Professionals	2.2	1.1	5.0	1.1	16.0	2.0	31.7	3.2
Technicians	6.6	1.6	9.7	2.2	9.7	2.5	15.8	2.7
Office work	6.9	1.3	15.2	1.6	21.1	2.7	21.2	4.5
Sales / Services	27.2	3.7	25.2	3.2	21.1	2.1	11.8	3.8
Trade / Transportation / Equipment operation	27.4	3.7	19.5	2.3	12.2	1.8	7.2	3.0
Primary sector occupation	8.5	1.7	6.9	1.7	4.7	1.9	9.8	1.7
Goods processing, manufacturing	15.7	2.4	8.7	1.2	3.1	0.8	4.5	1.0

Source: IALSS, 2003.

An examination of the survey results on the distribution of Anglophone and Francophone populations in Canada reveals two particular situations. First, while in most provinces studied, the proportion of professionals within the two language groups ranges between 8% (for New Brunswick) and 14% (for Ontario), Anglophones in Quebec stand out from the rest with a remarkable proportion of nearly 24%. Even compared to the situation of Anglophones in Alberta and British Columbia—two provinces that are especially well-performing from an economic standpoint—Anglophones in Quebec have a distinct profile. While the proportions of Anglophones who are managers and officials in Alberta (11%) and British Columbia (14%) are slightly higher than in Quebec (9%), the proportion of professionals in those provinces is much lower than in Quebec. At most, it is in the range of 12 to 13%.[21]

The second point concerns the situation of Francophones in New Brunswick. Whereas in Quebec, Ontario and Manitoba, the proportion of workers in occupations related to trade, transportation, equipment operation and goods processing and manufacturing ranges between 23% and 25%, the corresponding proportion for New Brunswick Francophones is 37%. The gap is largest in jobs in the primary sector and those in goods processing and manufacturing. As noted, these jobs often do not require any particular cognitive skills, or the skills they require are not as high as those required for professional or management jobs.

9.3 Education required to perform work as part of main job

The survey questionnaire asked respondents to state, in their opinion, the level of education required to do their main job. The results obtained confirm that Quebec Anglophones and New Brunswick Francophones stand apart. Nearly 29% of Quebec Anglophones report that the type of work that they do requires a university degree, a proportion much higher than that observed elsewhere in Canada. For the aggregate of the provinces other than Quebec, the proportion of Anglophones stating that their job requires a university degree is approximately 15%, a proportion similar to that observed for Francophone workers in Quebec and slightly lower than that observed for Franco-Ontarians (18%). The statistics gathered on New Brunswick Francophones show a quite different situation. While the proportions of Francophones and Anglophones having a job that requires a university degree are similar (11%), a much larger proportion of Francophones (38%) than of Anglophones (28%) state that their job requires less than a high school diploma. Among Francophones in Quebec, Ontario and Manitoba, the corresponding proportions are 26%, 24% and 27% respectively.

In comparing results from responses to questions about the education required to perform work as part of main job and the highest level of schooling reported by the respondent, it is possible to distinguish individuals who believe they are over-qualified from those who believe they are under-qualified. Almost no statistical difference was found between language groups. Overall, almost 60% of workers believe they hold a job that correspond to their actual level of schooling. Close to one in four workers believe they are over-qualified while around one in ten believe he/she is under-qualified. This only statistically significant difference between Francophones and Anglophones was found outside Quebec, where 27% of Anglophones believe they are overqualified compared to 22% of Francophones.

Table 17

Education required to perform work included in main job, by mother tongue and province, 2003

	English		French	
%	Standard error	%	Standard error	
Quebec				
Less than high school diploma	20.3	(1.9)	26.3	(0.9)
High school diploma/trades, business certificate	43.4	(2.3)	46.7	(1.2)
Post-secondary education without degree	7.7	(1.2)	11.8	(0.8)
University degree	28.6	(2.3)	15.3	(0.9)
Canada excluding Quebec				
Less than high school diploma	26.8	(0.9)	29.6	(1.2)
High school diploma/trades, business certificate	44.8	(0.9)	43.3	(1.0)
Post-secondary education without degree	13.2	(0.7)	11.6	(0.9)
University degree	15.3	(0.8)	15.4	(0.8)
New Brunswick				
Less than high school diploma	27.8	(2.6)	37.5	(2.6)
High school diploma/trades, business certificate	53.1	(2.7)	40.0	(2.1)
Post-secondary education without degree	8.1	(2.0)	10.9	(1.5)
University degree	11.1	(1.9)	11.5	(1.0)
Ontario				
Less than high school diploma	25.2	(1.6)	24.4	(1.3)
High school diploma/trades, business certificate	43.4	(1.8)	42.7	(1.0)
Post-secondary education without degree	14.9	(1.2)	14.7	(0.9)
University degree	16.5	(1.5)	18.3	(0.9)
Manitoba				
Less than high school diploma	29.1	(2.0)	27.2	(2.6)
High school diploma/trades, business certificate	47.5	(1.8)	50.5	(2.8)
Post-secondary education without degree	11.7	(1.2)	9.1	(1.6)
University degree	11.8	(1.2)	13.2	(2.2)

Source: IALSS, 2003.

9.4 Knowledge-oriented occupations

The first international report on the IALSS (OECD and Statistics Canada, 2005, p.135) describes recent studies that advocate the use of a modified version of the International Standard Classification of Occupations (ISCO) in order not only to reduce the number of occupational groups, but also to classify occupation types on the basis of their "knowledge" content and common skills requirements including cognitive, communication, management and motor skills. According to the study conducted by Béjaoui (2000), while many skills are required to carry out typical tasks associated with different jobs, occupations tend to cluster according to relatively few mixes of skills requirements.

Following on the studies of Boothby (1999) and Béjaoui (2000) and the approach used in the international report (OECD, Statistics Canada, 2005), we present here the information on occupations in the form of a classification into six types, representing six types of occupational tasks requiring various skills. Occupations are classified as follows: knowledge expert, management, information high-skill, information low-skill, services low-skill and goods-related. It should be kept in mind that the types of skills measured in the IALSS are associated with cognitive abilities only.

The international report (OECD, Statistics Canada, 2005, p. 135) summarizes as follows the descriptions that Bootby (1999) and Béjaoui (2000) provide of the different skills by occupation type.

> [K]nowledge expert types of occupations require the most use of cognitive skills, more than average management and communication skills as well as fine motor skills. Although managers are required to use cognitive skills slightly less intensely than experts, they are required to use management and communication skills the most often, making their required skills set the most balanced. Similar to experts, high-skill information occupations require the use of cognitive, management and communication skills more than the average. Although lower, low-skill information occupations also require the use of these skills slightly more than average. Low-skill services and good-related occupations require the use of these types of skills comparatively less often.

As expected in light of the statistics already presented, Quebec Anglophones stand out sharply by the fact that a much larger proportion of them are employed as "knowledge experts." It is also among them that we find the largest proportion of information high-skill workers. Thus, more than 17% of Quebec Anglophones are classified as knowledge experts and 20% as information high-skill workers. Among Francophones both in Quebec and outside that province, the corresponding proportions are 8% and 13% respectively. For Anglophones in Canada excluding Quebec, these proportions are 9% and 15% respectively.

When we compare the average score obtained on the combined prose and document scale by occupation type based on knowledge, it clearly emerges that regardless of occupation type, Anglophones outside Quebec perform statistically better than Francophones. In Quebec, no significant difference is observed.[22] Furthermore, as we have been able to observe thus far, very different average performance scores are observed depending on whether the respondent is, say, a knowledge expert or information high-skill worker or is instead a services low-skill worker or a worker in goods production.

Table 18

Distribution of occupations based on knowledge, by mother tongue and region

	Anglophones		Francophones	
	%	Standard error	%	Standard error
Quebec				
Knowledge experts	17.3	(2.6)	7.8	(0.7)
Managers	11.4	(1.2)	11.8	(0.8)
Information high-skill workers	19.9	(2.5)	13.2	(0.6)
Information low-skill workers	24.4	(2.0)	25.0	(1.1)
Services low-skill workers	12.7	(1.4)	16.3	(0.9)
Workers in goods-related occupations	14.4	(1.7)	25.8	(1.0)
Outside Quebec				
Knowledge experts	8.8	(0.6)	8.3	(1.2)
Managers	13.0	(0.8)	13.8	(1.2)
Information high-skill workers	14.5	(0.9)	12.2	(0.8)
Information low-skill workers	23.8	(0.9)	21.4	(1.3)
Services low-skill workers	17.9	(0.9)	17.4	(1.1)
Workers in goods-related occupations	22	(0.8)	26.9	(1.4)
New Brunswick				
Knowledge experts	4.5	(1.4)	6	(1.6)
Managers	11.7	(1.8)	8	(1.1)
Information high-skill workers	15.5	(2.4)	9.7	(1.1)
Information low-skill workers	21.5	(2.3)	19.9	(1.6)
Services low-skill workers	20.6	(3.0)	19.8	(1.9)
Workers in goods-related occupations	26.2	(3.2)	36.7	(2.0)
Ontario				
Knowledge experts	9.1	(1.1)	10.3	(1.2)
Managers	12.1	(1.4)	13.6	(1.0)
Information high-skill workers	14.6	(1.6)	15.9	(1.2)
Information low-skill workers	25.0	(1.7)	22.8	(1.2)
Services low-skill workers	19.4	(1.6)	14.5	(1.0)
Workers in goods-related occupations	19.9	(1.4)	22.9	(1.0)
Manitoba				
Knowledge experts	8.7	(1.2)	7.5	(1.2)
Managers	13.2	(1.5)	16.7	(1.9)
Information high-skill workers	13.3	(1.3)	15.4	(2.1)
Information low-skill workers	26.3	(1.5)	22.8	(2.9)
Services low-skill workers	18.2	(1.7)	17.5	(2.3)
Workers in goods-related occupations	20.3	(1.6)	20.1	(2.2)

Source: IALSS, 2003.

Chart 23a

Distribution of knowledge-oriented occupations by average score on combined prose and document scale, Canada excluding Quebec, 2003

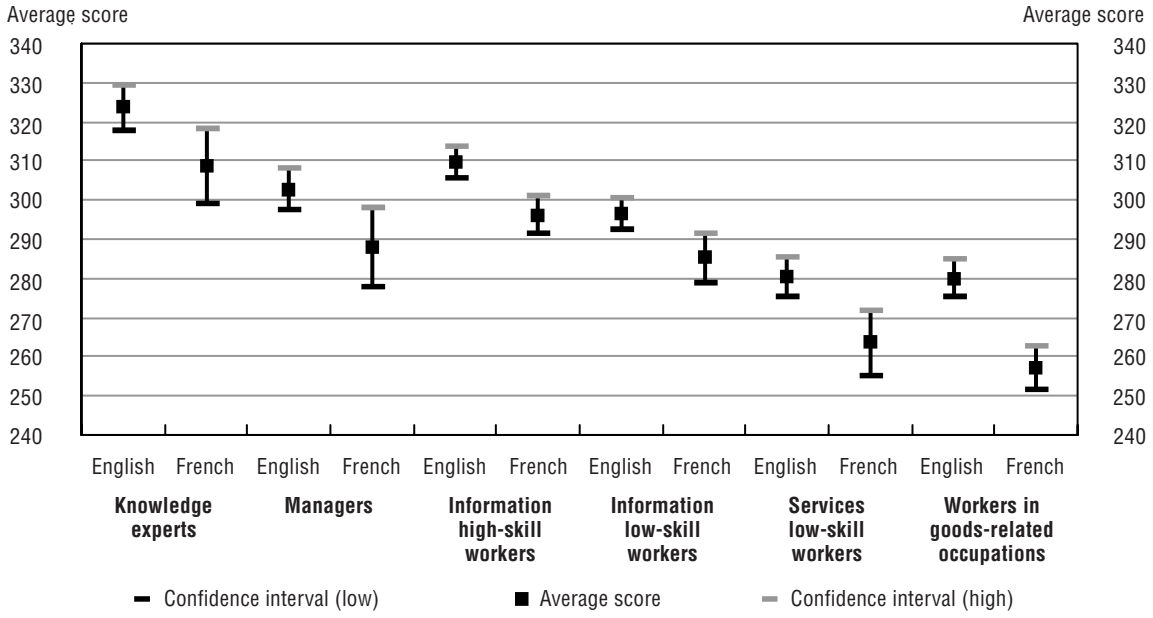
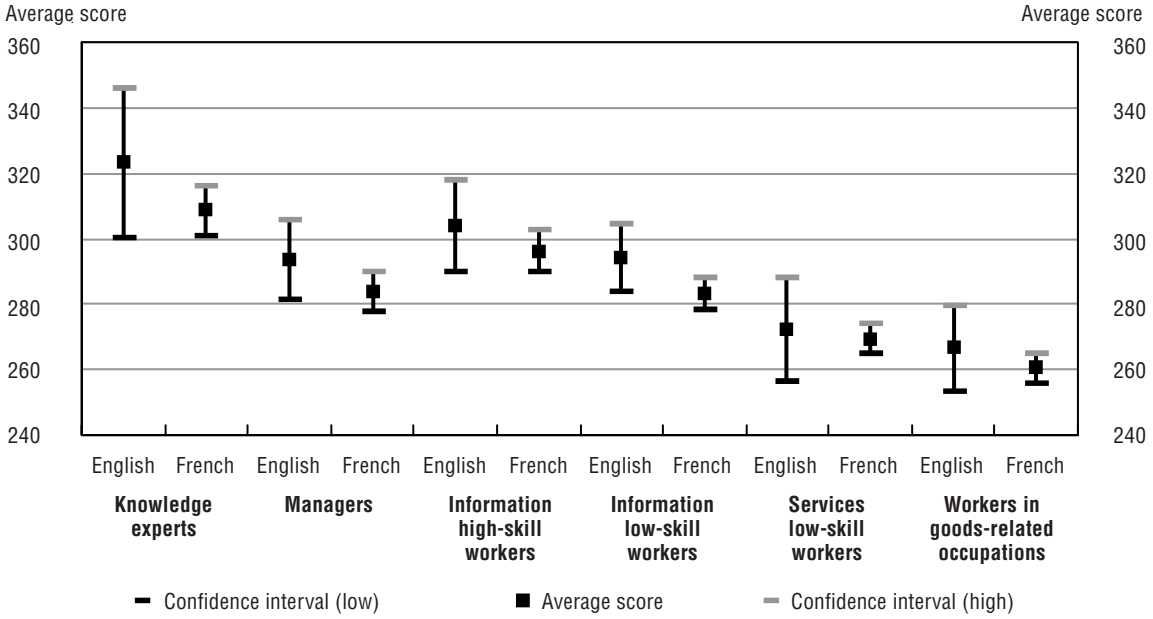


Chart 23b

Distribution of knowledge-oriented occupations by average score on combined prose and document scale, Quebec, 2003



10. Explanation of performance differences between language groups

Thus far, we have presented various results that identify elements or factors that influence the performance of individuals on literacy or numeracy tests. Previous studies showed that in general, individuals' education level is closely associated with their performance level. We also observed that the relationship between age and literacy level is complex, but that younger persons generally tend to register higher proficiency levels. The present study confirms the importance of education and age. It also brings out the strong relationship between the score obtained in the tests and the reading and writing habits in daily life, both at home and at work. We know that reading books or magazines regularly, visiting bookstores or libraries or owning books in the household are practices that correspond to higher proficiency levels in literacy. Regardless of the language group, we know that these factors are ones that determine individuals' skill levels. We also know that individuals who are in the labour market and are employed in jobs that require higher levels of schooling or in jobs related to the knowledge economy have more access to on-the-job training, education and continuing education which enable them to maintain or indeed improve their skills in various fields.

For historical reasons in particular, Francophones are generally in a less favourable situation than Anglophones. This is notably the case with respect to education, although the gap between the groups has greatly narrowed or even disappeared among younger persons. However, our analysis revealed that even with the same level of education, Francophones tend to read less and make less use of the written word than Anglophones. These findings are important. They possibly depict cultural as much as economic differences, notably characterized by the fact that Francophones do not place as much importance to reading and books as Anglophones.

In this study, we wanted to identify the various determinants and major factors likely to be associated with different proficiency levels in literature and numeracy. In particular, we wanted to explain the gaps between Francophones and Anglophones, including both those living in a minority situation and those in a majority situation.

In Quebec, overall, the results observed clearly confirm that the differential performance between Francophones and Anglophones is essentially the result of Anglophones having higher levels of education. Table 19 show indeed that in Quebec, the statistically significant difference between the mean scores of Francophones and Anglophones is almost 15 points. When one controls for education, the gap is of less than 7 points and ceases being significant.

Outside Quebec, the situation is different, most notably between New Brunswick and Ontario, these provinces being the place of residence of more than 76% of the population of French mother tongue outside Quebec at the time of the 2001 census.

Table 19a

Linear regression models showing effects of various variables on average scores on prose scale, population aged 16 years and over, Quebec, 2003

	Model 1	Model 2
	b	b
Mother tongue (French=0)	14.8**	6.6
Years of schooling	…	8.0***
Constant	**266.6**	**168.5**

*** α=.001
b = Coefficient
… not applicable

As Table 19b shows, the statistical difference between the average scores of Francophones and Anglophones in New Brunswick is close to 22 percentage points on the prose scale. Controlling for the number of years of education, the difference between the two linguistic groups is about 10 percentage points (alpha of 0.02). However, by isolating the influence of daily reading and writing habits, this difference is 4 percentage points and is not statistically significant[23]. These results confirm yet again that literacy skills are closely linked to individuals' education and to their reading and writing habits as practiced in their daily lives. The statistics shown in this study revealed that Francophones from New Brunswick read fewer books and practice writing activities less often than their Anglophone counterparts. We would first be lead to believe that this difference essentially arises from the fact that Anglophones are more educated and are more likely to live in an urban environment. However, statistics from IALSS reveal that even for a given level of education, Francophones indicate reading less and practicing fewer literacy related activities than Anglophones. Using the logistical regression technique, statistics show, for example, that even by isolating the influence of the highest level of education of Anglophones, the likelihood of mentioning that one possesses fewer than 25 books at home is nearly three times higher among Francophones than among Anglophones. The odds ratio displaying the likelihood of never going to a bookstore is equally of the same order of magnitude, even after controlling for the level of education. This finding remains true even when taking into account the fact that close to 45% of Anglophones and nearly 6 out of 10 Francophones live in rural environments.

Table 19b

Linear regression models showing effects of various variables on average scores on prose scale, population aged 16 and over, New Brunswick, 2003

	Model 1	Model 2	Model 3
	b	b	b
Mother tongue (French=0)	21.5***	9.7*	4.2
Years of schooling	…	9.9***	8.9***
Reading and writing habits: frequency (low =0)			
Medium frequency	…	…	18.9***
High frequency	…	…	17.1**
Constant	**250.5**	**139.1**	**141.3**

* α=.05
** α=.01
*** α=.001
b = Coefficient
… not applicable

Given the fact that Francophones indicate less frequent use of writing, the hypothesis of differential past family history of linguistic groups is worth considering at this point. The educational mobility of Francophones relative to their parents is very different from those of Anglophones. Statistics from IALSS show indeed that as long as the level of education of the parents is taken into account, the average scores of the two linguistic groups stop being statistically different, regardless of the level of education of the respondents. Thus, among the Anglophones possessing an education at least at the postsecondary level, 32 % of their parents had a level of education below that of a secondary diploma, comparatively to almost 57 % of Francophone parents. One can consider the hypothesis according to which the development of reading and writing habits in daily life as well as the development of an interest towards writing often starts within the family household. Thus, 38% of Francophones whose parents have less than a secondary school diploma reported having less than 25 books at home, in comparison with 15% of those whose parents have a postsecondary level of education. Similarly, 60% of Francophones whose parents have less than a secondary school diploma make little use of writing in their daily life compared to 25% of those whose parents have a postsecondary level of education.

The case of Ontario is similar enough to that of New Brunswick inasmuch as it clearly shows the importance of daily reading and writing practices. Just like New Brunswick, findings from the IALSS reveal that for a given level of education, Francophones read less and less often attend libraries and bookstores. The statistics presented on Table 18c show that the mean score difference between the two groups is initially 20 percentage points. Controlling for education, this difference is reduced to nearly 14 percentage points and close to 10 percentage points when we isolate the influence of age. It is not until taking into account the reading habits in everyday life that the difference stops being significant. Likewise, it is noteworthy that just as is the case in New Brunswick, the educational mobility of Francophones is much more important than that of Anglophones. Thus, while 16% of Anglophones having a postsecondary level of education are born into a family environment where the parents had less then a secondary school diploma, this proportion is 35% among Francophones.

As regards Manitoba, the difference between the mean scores of Anglophones and Francophones on the prose scale is 14 percentage points. When controlling for education, this difference is reduced to 9 percentage points. Taking into consideration the highest level of education of the parents and the age factor, the difference between the two linguistic groups is slightly less than 6 percentage points and stops being statistically significant.

Table 19c

Linear regression models showing effects of various variables on average scores on prose scale, population aged 16 and over, Ontario, 2003

	Model 1	Model 2	Model 3	Model 4
	b	b	b	b
Mother tongue (French = 0)	19.9***	13.9***	10.4***	3.6
Number of school years	…	8.0***	7.3***	4.8***
Age	…	…	-0.7***	-0.6***
Parents's schooling (Less than High school diploma = 0)				
High school diploma or equivalent	…	…	…	…
High school diploma or equivalent	…	…	…	7,9
Post-secondary studies	…	…	…	6,8
Reading and writing habits frequency (weak = 0)				
Average frequency	…	…	…	4.4**
High frequency	…	…	…	22.4***
Book store attendance(Never = 0)				
At least several times a year	…	…	…	27.9***
Once or twice a year	…	…	…	21.7***
Library attendance (Never = 0)				
At least several times a year	…	…	…	2.1
Once or twice a year	…	…	…	2.9
Constant	**263.1**	**161.8**	**206.9**	**199.5**

** α=.01
*** α=.001
b = Coefficient
… not applicable

Table 19d

Linear regression models showing effects of various variables on average scores on prose scale, population aged 16 and over, Manitoba, 2003

	Model 1	Model 2	Model 3
	b	b	b
Mother tongue (French=0)	14.4**	8,9**	5.8
Number of school years	…	7.6***	6.7***
Parents's level of education (Less then high school diploma = 0)			
High school diploma or equivalent	…	…	6.2
Post-secondary studies	…	…	11.1*
Age	…	…	-0.5***
Constant	**270.9**	**178.3**	**210.0**

* α=.05
** α=.01
*** α=.001
b = Coefficient
… not applicable

Conclusion

This report has shed light on a number of findings concerning the literacy situation of official language minorities. We first stressed that reading and writing habits should not be treated as generic or disembodied concepts; rather, they should be seen in relation to the linguistic, cultural, economic and social contexts in which people live. We then sought to apply such an approach by studying the literacy situation of official language minorities. The short historical overview presented at the start of the study shows eloquently that Francophones, both in Quebec and outside that province, have faced major obstacles that largely explain their longstanding lag in relation to Anglophones. As to Quebec Anglophones, while their situation differs from one region to another, their average literacy proficiency level is generally much higher than that of persons with French as their mother tongue.

The literacy situation of Francophones has greatly improved as a result of major social and political changes leading to access to education and compulsory school attendance to age 16. The lower results of Francophones in the IALSS are thus largely the result of socio-historical and cultural factors. However, this does not mean that problems of low literacy are non-existent among the younger age groups.

The IALSS testing results obtained by young Francophones aged 16 to 24 in New Brunswick and Ontario showed that nearly 45% of them scored below level 3 on the combined prose and document scale. This represents nearly 13,000 youths in New Brunswick and nearly 19,000 Franco-Ontarians. In comparison, approximately 34% of young Anglo-Quebecers in the same age group were in this situation, a proportion comparable to that observed among Francophone Quebecers. The situation of Francophones aged 25 to 44 in New Brunswick is even more problematic, since 18% of them were only able to place at level 1 on this scale, a proportion much higher than observed among Francophones of the same age group in the rest of Canada (11%).

In general, the differences in education level that exist between Francophones and Anglophones largely explain the different levels of success in the IALSS tests. These differences in education level are reflected in a number of characteristics and practices that affect literacy proficiency levels. For example, we have seen that apart from the Francophones of Prince Edward Island, those of New Brunswick have the largest proportion of persons aged 15 and over who have not completed grade 9. That province also had the largest proportion of workers engaged in occupations in the primary sector and occupations related to goods processing and manufacturing, which are occupations in which we observe the largest proportion of persons at level 1 on the literacy and numeracy scales. It also emerges that these sectors are the ones that exhibit the lowest frequency of using, reading or writing certain documents as part of one's main job. Generally, the level of schooling and the type of job held also determine the level of participation in adult education and training and participation in structured and non-structured modes of informal learning. In other words, more educated persons who hold a job using high literacy skills are also those who receive the most opportunities for on-the-job training from their employer.

The results of the IALSS revealed an important phenomenon with respect to reading and writing habits. At the same education and income levels, Francophones are less likely than Anglophones to have developed frequent reading and writing habits in their daily life. As a result, they are also less inclined to visit a library or bookstore or to have a large number of books in the household. This finding is reflected in lower literacy levels among Francophones outside Quebec in comparison to their Anglophone counterparts as measured in the IALSS tests.

Lastly, beyond the subject of literacy among Francophones, the results of the IALSS shed light on a twofold challenge for Francophone minorities outside Quebec and New Brunswick: literacy in French. For example, the large proportion of Franco-Ontarians and Franco-Manitobans who took the IALSS tests in English, at 63% and 85% respectively, is indicative of a demographic reality that these communities are faced with. Even though a large proportion of them stated that they had a very good or good ability to speak or write French, English was nevertheless their preferred language in their relationship to the written word.

Despite definite progress in the education of Francophones, such a finding clearly points to the major challenge of developing and maintaining awareness of the written word in French for the survival of Francophone communities in a minority situation.

References

Behiels, M. (2005), *Canada's Francophone Minority Communities : Constitutional Renewal and the Winning of School Governance*, McGill-Queen's University Press, Montréal et Kingston.

Béjaoui, A. (2000), *L'évolution de la prime associée aux qualifications et son implication quant aux changements de la structure des salaires*, Université de Montréal, Montréal.

Bernard, R. (1998), *Le Canada français : entre mythe et utopie*, Hearst, Les éditions Le Nordir.

Bernard, R. (1988), *De Québécois à Ontarois*, Hearst, Les éditions Le Nordir.

Boothby, D. (1999), «Literacy Skills, the Knowledge Content of Occupations and Occupational Mismatch», Working Paper 99-3E, Applied Research Branch, Human Resources Development Canada, Hull.

Boucher, A. (1989). *En toutes lettres et en français: l'analphabétisme et l'alphabétisation des francophones au Canada*. Montréal : Institut canadien d'éducation des adultes (ICÉA).

Copp, T. (1974), *The Anatomy of Poverty : The Condition of the Working Class in Montreal, 1897-1929*, McClelland & Stewart, Oxford.

Corbeil, J.P. (2000), *Literacy in Canada : Disparity between Francophones and Anglophones : A data analysis from the 1994 International Adult Literacy Survey.* Statistics Canada.

DRHC and Statistics Canada (1996), Reading the Future *: A Portrait of Literacy in Canada*, Ottawa.

Hautecoeur, J.-P. (1996). "Is Literacy, 'A Good Deal'? A Critique of the Literacy Debate in Canada." In *Alpha 96 : Basic education and work*, edited by J-P. Hautecoeur, (p. 67-95). Toronto: Culture Concepts.

Kirsch, I. S., Jungeblut, A. Jenkins, L. et Kolstad, A. (Ed.) (1993), *Adult Literacy in America: A first look at the National Adult Literacy Survey*, National Center for Education Statistics, US Department of Education, Washington, DC.

Kirsch, I.S., Jungeblut, A., et Campbell, A. (1992), *Beyond the school doors : The literacy needs of job seekers served by the US Department of Labor*, Princeton, New Jersey: Educational Testing Service (ETS), U.S. Department of Labor, Employment and Training Administration.

Lambert, W.E., Gardner, R.C., Olton, R. et Tunstall, K. (1968). « A Study of the Roles of Attitudes and Motivation in Second Language Learning », p. 473-491 *in* Fishman, J.A., ed., *Readings in the Sociology of Language*. La Haye et Paris : Mouton.

Livingston, D.W. (1999), «Exploring the Icebergs of Adult Learning; Findings of the first Canadian survey of informal learning practices», *Canadian Journal for the Study of Adult Education*, Vol. 13 (2), pp.49-72.

Martel, A. (1991), *Les droits scolaires des minorités de langue officielle au Canada : de l'instruction à la gestion / Official Language minority education rights in Canada : From instruction to management*. Ottawa : Commissariat aux langues officielles.

Murray, T.S., Clermont, Y. and Binkley, M. (eds.)(2005). *Measuring Adult Literacy and Life Skills : New Frameworks for Assessment.* Statistics Canada, Canada.

Murray, T. S., Kirsch, I., et Jenkins L. (Ed.) (1997), *Adult Literacy in the OECD Countries : Technical Report of the First International Adult Literacy Survey.* National Center for Education Statistics, US Department of Education, Washington, DC.

OECD and Statistics Canada, (2005), *Learning a Living : First Results of the Adult Literacy and Life Skills Survey*.

OECD and HRDC (1997), *Literacy Skills for the Knowledge Society : Further Results from the International Adult Literacy Survey*, Paris : OECD and Ottawa : Human Resource Development Canada.

OECD and Statistics Canada (1995), *Literacy, Economy and Society Results of the first International Adult Literacy Survey.* Paris OECD and Ottawa : Minister of Industry.

Rudin, R. (1985), Forgotten Quebecers: a history of English-speaking Quebec, 1759-1980, Québec, Institut Québécois de recherche sur la culture.

Strucker, J. et Yamamoto, K. (2005), *Component Skills of Reading : Tipping Points and Five Classes of Adult Literacy Learners*, (unpublished).

Thomas, A. (1983). Adult illiteracy in Canada : a challenge. Occasional paper no.42, Ottawa: Canadian Commission for Unesco.

Tuijnman, A.C. (2001). *Benchmarking Adult Literacy in North America: An International Comparative Study.* Ottawa: Statistics Canada and Human Resources Development Canada.

Wagner, S. (1991). "Literacy and assimilation : the case of francophones in Canada" In *Alpha 90 : Current Research in Literacy*, edited by J-.P. Hautecoeur, p.53-84, Québec : Ministère de l'Éducation du Québec and Hambourg, UNESCO.

Wagner, S. (2002), Literacy and Literacy Training of Francophones in Canada: Results of the International Adult Literacy Survey (IALS), in collab. with J.P. Corbeil, P. Doray et É. Fortin., Statistique Canada, Ottawa.

Notes

1 A grant from Canadian Heritage and and the National Office of Literacy and Learning, HRSDC made it possible to oversample individuals belonging to official language minorities and insert a number of supplementary questions into the 2003 ALL. The oversampling of Franco-Ontarians was funded by the Ontario government. Table A in the Appendix provides more details on the composition of the sample used to produce estimates in the ALL survey.

2 Several of the historical factors referred to in this section are drawn from the studies of Martel (1991), Behiels (2005) and Rudin (1985).

3 The four provinces presented here are those for which it was possible to conduct an oversampling of linguistic minorities for the IALSS.

4 Chenard, P. and Lévesque, M., La démocratisation: succès et limites. *Le Québec en jeu: comprendre les grands défis.* Under the direction of Gérard Daigle with the collaboration of Guy Rocher. Presses de l'université de Montréal, 1992, pp. 385-422.

5 Ibid., p. 386.

6 Persons whose mother tongue is other than English or French.

7 Thomas (1983) states that according to the Canadian Commission for UNESCO, most print information intended for Canadian adults was written for a reader with Grade 10 or more.

8 Language groups are defined here according to the criterion of mother tongue, meaning the first language learned in childhood and still understood at the time of the survey.

9 Reading skill level 4 in the 1989 LSUDA is considered to be approximately equivalent to levels 3, 4 and 5 in the 1994 IALS.

10 An individual's age is not a "disembodied" variable, since it situates him/her within, say, a particular stage of life or within a cohort of individuals who may have similar life experiences.

11 In the 1994 survey, the corresponding proportion of Francophones outside Quebec was 54 %.

12 It is interesting to note that taking the standard error into account, this statistic is similar to the one obtained in the 2001 Census, namely 61.6%.

13 The standard error associated with this estimate is 3.2, yielding a confidence interval of +/- 6.3 percentage points.

14 The term "probability" is not necessarily the best to convey the sense of the term "odds." "Likelihood of occurrence" is another possibility. In other words, an odds ratio of 1.8 means that those who speak French at home are nearly twice as likely to rank at Level 1 or 2 as those who speak English at home.

15 The survey questionnaire did not ask Quebec Anglophones to state the frequency with which they read newspapers in French.

16 Adults 65 and under. Excluded from adult education and training are all youths aged 16 to 19 registered full-time in any educational program leading to a certificate or diploma and all youths aged 20 to 24 registered full-time in a post-secondary education program. Includes only those for whom no direct costs associated with the educational program are borne by an employer, a trade union or a professional association.

17 The results shown here concern participation in a broad sense, since respondents were asked whether, during the last 12 months, they had taken any education or training. This education or training includes programs, courses, private lessons, correspondence courses, workshops, on-the-job training, apprenticeship training, courses in arts, crafts or recreation, or any other training or education.

18 For example, a high school diploma, a trade/vocational or apprenticeship certificate, a college or CEGEP diploma, a diploma awarded by a private educational institution or a university certificate or diploma.

19 We thus distance ourselves from the dichotomy between "passive" and "active" modes of informal learning proposed by the international and national reports, which suggests that the learning context is being confused with the learning activity itself.

20 Note that this distribution is essentially the same as that observed for the Anglophone population living outside Quebec and the population of Quebec Francophones. The results observed for Quebec Anglophones are also in the same range, but the margins of error associated with the estimates are too large to allow reliable comparisons.

21 No table showing the situation of Alberta and British Columbia is included here since that is not the focus of this study. The statistics presented here are used only to illustrate our point.

22 However, standard errors are especially high for the Anglophone sample.

23 We recognize that the use of an index of reading habits and daily use of texts as a dependant variable may be debatable in such a linear regression model given the obvious relationship that exists between proficiency in literacy and reading and writing habits. However, since sound daily reading habits can maintain as well as improve individuals' level of literacy and that a high level of education does not necessarily involve strong reading habits, the use of such an index is then justified here.

Appendix

Table A

Sample size by province and territories by mother tongue, IALSS, 2003

	French	English	Other
Canada	**7,181**	**11,659**	**4,198**
Newfoundland	4	1,285	10
Prince Edward Island	39	593	13
Nova Scotia	68	1,170	34
New Brunswick	1,083	372	11
Quebec	2,943	695	528
Ontario	2,334	1,291	1,321
Manitoba	522	1,366	379
Saskatchewan	45	1,066	183
Alberta	43	962	302
British Columbia	28	1,149	672
Yukon	33	924	135
Northwest Territories	27	630	161
Nunavut	12	216	449
Canada less Quebec	4,238	10,964	3,670