

2009–2010

STATE OF LEARNING IN CANADA A YEAR IN REVIEW



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2009–2010

STATE OF LEARNING IN CANADA A YEAR IN REVIEW

EXECUTIVE SUMMARY

SYNTHESIS: WHAT THIS REPORT TELLS US

The 2009–2010 *State of Learning in Canada* provides the most current information on the Canadian learning landscape, contributing to a comprehensive understanding of how Canadians are faring as lifelong learners.

As in previous *State of Learning* reports, this update reflects CCL's vision of learning as a lifelong process. Our research affirms time and again that the skills and knowledge that citizens bring to their families, their workplaces and their communities help determine a country's economic success and overall quality of life.

It is this core value that continues to guide our research and our commitment to fostering a learning society, in which all members can develop their full potential as active, engaged learners and contributing members of their community.

This update takes a lifecourse approach, beginning with learning in the early childhood learning and school-based education through to the formal and informal learning of adults. Highlights from the recently released report on the *State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success* (2009), which introduced the first application of a comprehensive approach to measuring Aboriginal Learning in Canada, are also included.

HIGHLIGHTS

Early Childhood Learning

Learning in the first five years of childhood has critical implications for well-being and later success in school, at work, and in the community—more so than learning in any other stage of life. It involves the development of a range of skills, including physical, cognitive, language and communications, and emotional and social. Early learning is influenced by the quality of the education and/or care environment.

Physical development:

Physical development during the early childhood years can affect play, exploration and interpersonal interactions. The development of fine-motor skills is necessary to prepare young children for common school tasks, such as controlling a pencil or turning a page.

Research indicates that the majority of Canadian children three years old and younger have average or above-average fine-motor skills.

Cognitive development

Cognitive development includes mental processes such as thinking and reasoning. According to the most recent results of the National Longitudinal Survey of Children and Youth (NLSCY), the majority of Canadian children aged four and five display an average or advanced level of cognitive development. They are able to recognize and use geometric shapes, use symbols like letters and words, and comprehend numbers.



Language and communications skills

Recent data show that most young children in Canada demonstrate average communication skills—they are able to vocalize and understand oral speech and convey a message to someone else.

Being read to daily also plays a critical role in developing language and communication skills. Encouragingly, a higher proportion of young children in Canada are being read to daily than was the case a decade ago.



Emotional and social development

Most young children in Canada are developing at an average or above-average rate in personal and social skills. Levels of physical aggression improved slightly from the previous year, while indirect aggression (such as taking revenge or spreading gossip) was unchanged.

Early childhood education and care (ECEC)

The education and care environment a child experiences plays a critical role in their overall development. However, a recent report by the United Nations Children's Fund (UNICEF) ranked Canada at the very bottom of 25 developed countries in the quality of ECEC programs in terms of access, financing and policy.

Learning in School

During the elementary and secondary school years, children and youth develop the skills they need to make the successful transition to adulthood. Young learners' performance in science, mathematics, problem solving, reading and other competencies is linked to later achievements, such as participation in post-secondary education, better-paying jobs, and more stable employment.

Science and environmental awareness

A growing number of jobs today call for the technical competence and complex problem-solving skills provided by science courses offered during the formal years of education. According to the Organisation for Economic Co-operation (OECD), knowledge and skills in science are critical to economic progress in an increasingly technology-based society.

The most recent data from the OECD's Programme for International Student Assessment (PISA) indicates that a higher proportion of Canada's 15-year-olds are top performers in science compared to students of the same age in other OECD countries.

Further, our schools are successfully educating children and youth about personal and social responsibility related to environmental issues ranging from air pollution to energy shortages to nuclear waste. However, research indicates that only a minority of students believe that environmental issues will improve in the next 20 years.

Costs associated with non-completion of high school

Research has shown that high-school graduates are more employable, have a wider selection of jobs to choose from and earn more money than those who leave school before obtaining their diploma.

Non-completion of high school has been shown to have enormous social and economic implications, including costly expenditures on social services and programs, education, employment, and criminality, and lower economic productivity and health. Students who drop out cost Canada's social assistance programs and criminal justice system more than \$1.3 billion annually.

Encouragingly, over the last 20 years, fewer students are dropping out.

Post-secondary Education

Post-secondary education is the cornerstone of a skilled workforce, which is linked to higher productivity, innovation and economic growth, and to the strengthening of communities through higher civic engagement and social cohesion. It also offers widespread benefits to individuals including: higher wages and job satisfaction, fewer periods of unemployment and improved health and quality of life.

Data show that younger Canadians are generally more educated than their older counterparts and that they are more inclined to choose a university education over a college diploma or trades certification.

Enrolment in the trades

Enrolment in the trades appears to be on the rise, perhaps in response to labour market demand. More individuals were enrolled in apprenticeship training programs in 2007 than in 2006, more than double the level recorded a decade before, in 1997.

Further, more Canadians completed their apprenticeship training in 2007 than in the previous year, the fastest rate of yearly growth in the last 10 years.

Multiple pathways to PSE

Many young Canadians are participating in and completing post-secondary programs along different pathways than students from previous years. Some students still follow the traditional linear pathway through PSE, while many follow less direct routes, which can include attending more than one post-secondary institution or switching programs of study, and often while combining both work and study.

Results of Statistics Canada's 2007 National Graduates Survey indicated that a higher proportion of 2005 graduates followed an indirect pathway to, and through, their post-secondary studies compared with graduates from the Class of 2000. Approximately one-half of the graduates surveyed did not enter PSE directly from high school. In addition, more 2005 graduates had pursued previous post-secondary studies.



Monitoring student debt load is important to understanding issues of persistence in PSE. The 2007 National Graduates Survey (Class of 2005) indicated that nearly one-half of all graduates in 2005, who did not pursue further education, had incurred a student debt upon graduation.

Although most post-secondary students in Canada are between the ages of 18 and 24, participation rates for older learners in education, particularly post-secondary education, must be considered if Canada's approach to lifelong learning

is to move forward. According to Statistics Canada's Access and Support to Education and Training Survey (ASETS), in 2008 a notable proportion of Canadians aged 25 and older participated in an education program.

Adult Learning

Adult learning can take many forms, including a return to formal education and non-formal and informal learning activities. Learning plays a critical role in enabling Canadian adults to maintain the skills and knowledge needed to make informed decisions and lead successful lives. Research has shown that individuals with higher levels of education tend to lead longer and healthier lives, are more engaged in their community, and express greater personal satisfaction with their lives.

Learning and health

An individual's health literacy—their ability to perform health-related tasks such as reading nutrition labels, following medication directions, or understanding safety instructions—can have a direct bearing on their health. Research has shown that an individual with more education is better able to gather and interpret health-related information, which has implications for their health.

The 2008 Survey of Canadian Attitudes toward Learning (SCAL) showed that Canadian adults relied on multiple sources of information on health and well-being, but those with more education were more sceptical about the reliability of certain sources.

Work-related learning and training

Learning for work can involve the acquisition, upgrading and updating of job-specific skills, as well as the strengthening of soft skills, such as communication, critical thinking and problem-solving abilities. The learning can be formal, non-formal, or informal (including self-directed) and can take place on-site or away from the workplace. The availability of on-the-job training is especially important to Canadian workers who want to improve their skills but may not be able to access the training they need outside of work.

According to ASETS, in 2008 the participation rate for working-age adults in job-related education or training increased significantly from 2002. For the most part, this increase is attributable to an increase in job-related training while participation in job-related education programs remained unchanged.

Volunteering in the community

Participation in activities such as volunteering in the community can foster a sense of community engagement that can support the sharing of information and knowledge. Research has suggested that adults who are more active in community organizations, as volunteers or as non-volunteers, are more likely to participate in adult learning.

Almost half of Canadians aged 15 and over volunteered during 2007, a rate that has largely remained the same since 2004.

Aboriginal Learning

Highlights from the State of Aboriginal Learning in Canada are presented in this update. They include updates of standard indicators such as high-school completion rates but also data that highlight new information about how Aboriginal people learn, derived from new data sources, such as exposure to Elders, use of traditional skills, participation in Aboriginal cultural activities, and participation in extracurricular social activities.



Elders

New information shows that in 2006 approximately four in 10 off-reserve Aboriginal youth interacted with Elders at least once a week (outside of school). Inuit youth reported the highest interaction with Elders followed by First Nations youth living off-reserve and Métis youth.

Use of traditional skills

Learning from the land—through the use of traditional skills such as hunting, fishing, trapping and camping—is an essential aspect of First Nations, Inuit and Métis learning. Acquiring these skills entails a significant amount of experiential learning—a purposeful mode of learning that is most often associated with activities that occur outside the classroom.

According to Statistic Canada's Aboriginal People's Survey (APS), half of all Aboriginal youth and adults living off reserve had taken part in hunting, fishing, trapping or camping in 2006. The proportions were much higher for Aboriginal youth and adults living in rural communities, particularly Inuit living in northern communities, compared to those living in smaller towns and large cities.

Participation in cultural events

Despite reports of often limited cultural opportunities, in 2006 more than one-quarter of all off-reserve Aboriginal children aged five and under participated in or attended a culturally-related activity such as singing, drum dancing, fiddling, gatherings or ceremonies in the preceding year.

High-school non-completion rates

Academic success among Aboriginal youth can vary tremendously—among Aboriginal groups, across geographic regions and between communities. Existing indicators of academic success must be approached with a degree of caution, and the urge to over-simplify resisted.

In 2006, three times as many Aboriginal young adults aged 20 to 24 had not completed high school, compared with the rate for non-Aboriginal adults.

The rate of non-completion was even higher for First Nations living on reserve and for Inuit living in remote communities. These numbers are distressing given the importance of a high-school diploma in the pursuit of further education, training and employment.

Participation in extracurricular activities

In 2006, off-reserve Aboriginal youth aged 6 to 14 participated in extracurricular activities at rates equal to or above the rate for Canadian youth. Almost one in three reported participating in social clubs or groups on a regular basis, while more than one-third participated in art or music activities and more than two-thirds were active in sports.



Participation in post-secondary education

From 2001 to 2006, university attainment among Aboriginal people increased but still remained well behind university attainment rates for non-Aboriginal people. However, research shows that the majority of Aboriginal people who participate in PSE attend either a college or trade school, rather than a university. The proportion of Aboriginal adults who had completed a college diploma was on par with non-Aboriginal adults.

Canada's vast geography can play a role in the ability of many Aboriginal people to participate in PSE. Distance education—or the use of information and communications technologies (ICTs) to support formal learning—is increasingly being looked to as a means of supporting Aboriginal people living in remote areas. In 2006, almost one in five Aboriginal people aged 15 to 64 took some form post-secondary programming via distance education.

CONCLUSION

While Canada has much to celebrate with regard to its formal education sector, we cannot afford to remain complacent. Lack of progress in lifelong learning threatens to undermine the development of our greatest asset—the potential of our people.

As this update indicates, Canada has made little, if any, progress in lifelong learning over the past several years.

We remain in a holding pattern that contradicts what we profess to know is true – that securing a sustainable future and quality of life depends on the development of our people.

If left unchecked, lack of progress in learning at every stage of life could soon translate into increased pressures on many sectors of Canada's economy including social assistance programs, the health care system and the criminal justice system. Importantly, these pressures also diminish Canada's economic competitiveness.



Economics is but one part of the equation that defines the success of Canada. As CCL has often stated, the very future of Canadian society depends on our willingness to invest in lifelong learning in all its dimensions, to build on our solid foundation of formal education, while also addressing systemic weaknesses that undermine our current and future success.

INTRODUCTION

THE IMPORTANCE OF LIFELONG LEARNING

The Canadian Council on Learning (CCL) recognizes that continuous learning over the life course is key to individual development, social cohesion and economic prosperity. Learning fosters our ability to think, innovate and solve problems. Beginning in early childhood and continuing throughout the adult years, learning shapes virtually every aspect of our lives.

Lifelong learning is associated with a wide range of economic and social benefits. It has the potential to maximize the talents and skills of individuals, and contribute to higher productivity, improved health, longer lives and a greater likelihood of community and civic engagement. Learning begets learning, which in turn enhances opportunities to achieve personal aspirations and societal goals.

Research clearly demonstrates that learning and training are more critical now than ever as shifting workforce demographics, rapid advancements in technology and increased global competitive pressures are transforming our society. Learning and education can also act as protective factors during periods of economic uncertainty. A skilled and adaptable workforce is better able to withstand economic shocks and to adjust to changes in the global economy and shifts in labour market demand.

THE STATE OF LEARNING IN CANADA

Within this context in 2007, CCL published *State of Learning in Canada: No Time for Complacency* its inaugural report in the State of Learning series. This was followed by *State of Learning in Canada: Toward a Learning Future* in 2008.

Both reports brought Canada's learning landscape into focus by taking a life-course approach to measuring the learning progress of Canadians. Using a series of detailed indicators, the reports examined many of the factors that contribute to successful lifelong learning within five learning domains:

- Early childhood learning
- Learning in school
- Post-secondary education
- Adult learning
- Aboriginal learning

ABOUT THIS REPORT

State of Learning in Canada 2009–2010: What We've Learned Since 2008, provides a data update of the indicators discussed in previous State of Learning reports (2007 and 2008). Its purpose is to enhance our understanding of Canada's progress in learning through newly released reports or recently analyzed data. Timely and relevant information allows us to continue monitoring Canada's progress in learning, and advances our efforts to establish clear learning objectives and identify possible areas for societal action.

THE REPORT IS ORGANIZED INTO FIVE CHAPTERS:

Chapter 1: Early Childhood Learning

The learning that takes place between birth and age five set the stage for a child's success, not only in school but throughout life. This chapter reports on key areas of early childhood development in Canada (physical, cognitive, language, communications skills, as well as emotional and social) and on early childhood education and child care.

Chapter 2: Learning in School

These years form a critical period in which children and youth (ages 5 through 18) develop attitudes about the value and purpose of learning, essentially learning how to learn. This chapter reports on students' progress in key areas such as academic skills (math, reading and science), use of information and communication technologies (ICTs), citizenship participation, community and civic engagement, and health and safety. It also reports on high-school dropout rates (and the associated costs) and the link between student engagement in high school and participation in PSE.

Chapter 3: Post-Secondary Education

The demand for highly skilled workers has made learning during the post-secondary years (ages 18 through 27) a critical element of future success in the labour market. This chapter provides a summary of, and updates to, CCL's third annual report on post-secondary education, *Meeting our Needs?* It uses a series of detailed indicators based on eight thematic areas initially derived from provincial and territorial strategic plans for PSE: from access to attainment; access for under-represented groups; lifelong learning; affordability and sustainability; innovation, knowledge creation and knowledge transfer; active, healthy citizenry; a skilled and adaptable workforce; and quality PSE.

Chapter 4: Adult Learning

Learning during the adult years (ages 25 and beyond) plays a critical—and often overlooked—role in enabling Canadians to maintain the skills and knowledge needed to make informed decisions and lead successful lives. This chapter reports on key indicators of adult learning, including adult literacy and health literacy, and informal and formal learning within the contexts of the workplace, home and community.

Chapter 5: Aboriginal Learning

Until now, a comprehensive framework for measuring Aboriginal learning has not been available in Canada, or indeed most of the world. Conventional measurement approaches have typically focused on the discrepancies in educational attainment between Aboriginal and non-Aboriginal youth (in particular, high-school completion rates) and have not been built from a perspective of learning that reflects Aboriginal people's specific needs and aspirations. This chapter reports on the findings of CCL's newly released *State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success* (2009), which introduces the first application of an innovative approach to measuring Aboriginal learning in Canada.

Indicators for each of the learning domains were developed over time through a review of the literature, existing research and through consultations with experts. The current set of indicators used in the report reflects a common set of measures used to monitor progress and trends in learning.

This report uses data derived from a wide range of sources including: the Organisation for Economic Co-operation and Development (OECD); Statistics Canada; Canadian federal and provincial government documents and websites; and academic and professional journals and articles. A full listing of sources is available in the bibliography which can be found at the end of the report.

CHAPTER 1:

EARLY CHILDHOOD LEARNING

Children's experiences in the first few years of their lives have a lasting impact on their development and future learning. As American economist and Nobel laureate James J. Heckman has noted, learning begins long before formal education begins—in infancy—and continues throughout one's life. Early learning begets later learning and early success, and increases the likelihood of later success.¹

No other stage in the life cycle has such far-reaching implications. Research has shown that quality of early childhood learning affects an individual's health, well-being and skill development, and lays a foundation for reading, writing, mathematics and science skills.²

Indeed, investments in early childhood learning and education can yield lifetime returns.

To understand the state of early childhood learning in Canada, CCL focuses on four areas of development: physical development, cognitive development, language and communication skills, and emotional and social development.

This chapter also explores an important environment in which young children learn: early childhood education and care.

KEY INDICATORS OF EARLY CHILDHOOD LEARNING

Physical Development

- Fine motor skills

Cognitive Development

- Who Am I? Test
- Number Knowledge Assessment

Language and Communications Skills

- Receptive vocabulary
- Communication skills
- Read-to daily

Emotional and Social Development

- Physical aggression
- Indirect aggression
- Personal and social skills

Early Childhood Education and Care

- Child care

Physical Development

Physical development in the early years of an individual's life includes the senses and motor development, which affect play, exploration and interpersonal interactions.

Fine motor skills

According to Statistics Canada, in 2006–2007 nearly 85% of Canadian children under the age of three* had average or above-average fine-motor skills.³ In this age group, more boys (19%) than girls (11%) were considered delayed in their development; a finding that is consistent with previous data from 2004–2005.⁴

Table 1.1: Comparison of fine motor skills in Canadian children, aged three and under,^a by sex, 2006–2007.

Gender	Delayed	Average or Above Average
Boys	18.9%	81.1%
Girls	11.5%	88.5%
Both Sexes	15.3%	84.7%

Note: ^a Includes children between the age of three months and 47 months.

Source: Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth. Cycle 7, 2006–2007, special tabulation (unpublished data).

Cognitive Development

Cognitive development includes mental processes such as thinking and reasoning. Statistics Canada's National Longitudinal Survey of Children and Youth (NLSCY) relies on two tests to assess the cognitive development children between the ages of four and five. The *Who Am I?* test assesses a child's ability to conceptualize and understand symbols and the Number Knowledge Assessment examines a child's early comprehension of numbers.

Longitudinal data show that school-readiness (i.e., the academic knowledge and skills that children bring to their first days of school) contributes to their subsequent learning in early grades.⁵ Children at age five who had significantly higher scores on knowledge of numbers and the ability to copy and use symbols also had high mathematics test scores at age nine.⁶

* Includes those aged three to 47 months.

'Who Am I?' Test

In 2006–2007, the *Who Am I?* test indicated that 22% of children from low-income families had delayed development in their ability to conceptualize and understand symbols; compared with 18% of other children.⁷ This finding is slightly higher but consistent with the 2004–2005 *Who Am I?* Test finding where 19% of children from low-income families were considered delayed, compared with 14% of children from non-low-income families.⁸

Number Knowledge Assessment

The Number Knowledge Assessment found that in 2006–2007, 26% of children from low-income families showed delayed development, compared with 15% of other children.⁹ Although this finding is consistent with that of the 2004–2005 assessment (28% compared to 14%),¹⁰ it appears that the developmental gap between the income levels has narrowed (by 4 percentage points). In 2006–2007, children from low-income families scored 11 percentage points lower in development than other children, an improvement from the 15 percentage point difference in 2004–2005.

Table 1.2: Comparison of cognitive development in four- and five-year-olds, by household income, Canada, 2006–2007.

	Delayed	Average	Advanced
Who Am I? Test			
Below LICO ^a	22.1%	69.6%	8.3%
At or above LICO	18.0%	67.2%	14.8%
TOTAL	18.6%	67.6%	13.8%
Number Knowledge Assessment			
Below LICO ^a	25.7%	67%	F
At or above LICO	14.7%	73.9%	11.5%
TOTAL	16.4%	72.8%	10.8%

Note: ^a Low income cut-off (LICO)
F = Too unreliable to be published.

Source: Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth. Cycle 7, 2006–2007, special tabulation (unpublished data).

Language and communication skills

Research has shown that language acquisition is a crucial component of healthy childhood development. It can have an impact on a child's capacity to read and write,¹¹ socialize,¹² and understand information and situations.¹³

Receptive vocabulary

The Peabody Picture Vocabulary Test–Revised (PPVT-R) assesses receptive vocabulary—or the words a child can understand—at ages four and five. The test, included in Canada in the NLSCY, requires the child to identify pictures that match words being read aloud by an interviewer.

Most Canadian children assessed using the PPVT-R since 1994–1995 showed average or advanced progress. In 2006–2007, the proportion of Canadian children who scored in the delayed range showed a slight decline; from 16% in 1994–1995 to 14%.¹⁴

In 2006–2007, 32% of children from low-income families were considered to have delayed receptive vocabulary, compared with 11% of children from families that were not low-income.¹⁵ These findings are similar to those from 2004–2005.¹⁶

Table 1.3: PPVT-R test of language development in four- to five-year-olds, Canada, 1994–1995 to 2006–2007.

Year	Delayed	Average	Advanced
1994–1995	15.9%	68.8%	15.3%
1996–1997	16.7%	69.5%	13.9%
1998–1999	15.9%	70.8%	13.3%
2000–2001	14.5%	69.1%	16.4%
2002–2003	13.1%	69.6%	17.3%
2004–2005	13.6%	70.0%	16.5%
2006–2007	14.1%	70.1%	15.8%

Source: Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth, various Cycles, special tabulation (unpublished data).

Communication skills

The NLSCY assesses communication skills by measuring a child's capacity to vocalize, understand oral speech and pass a message on to someone else.

In 2006–2007, the majority (88%) of children three-years-old and younger displayed average or better-than-average communication skills; a decrease from the percentage in 2004–2005 (90%). More boys (15%) than girls (7%) displayed delayed development.¹⁷ These findings are above those from 2004–2005, which indicated that more boys (13%) than girls (7%) exhibited delayed development.¹⁸

Read-to daily

According to the NLSCY, a higher proportion of children aged five and younger were read-to daily in 2006–2007, at 66%, than in 1994–1995, at 56%.¹⁹

In 2006–2007, 60% of children in this age group from low-income families were read-to daily, compared with 67% of children from families that were not considered low-income.²⁰ The percentage of children from low-income families being read to daily has improved slightly since 2004–2005; 57% compared to 67% of children who were not from low-income families.²¹

Emotional and Social Development

Healthy emotional and social development of children includes skills such as: the ability to control emotions, integrate with peers and develop social and emotional bonds. To measure children's social and emotional development, the NLSCY uses several indicators: the level of physical aggression (bullying, being mean, fighting), indirect aggression (taking revenge, telling secrets, spreading gossip), and personal and social skills.²²

Physical aggression

In 2006–2007, more boys (14%) than girls (10%) between the ages of two and five showed high levels of physical aggression.²³ This finding represents a decrease overall from 2004–2005 (16% of boys and 12% of girls).²⁴

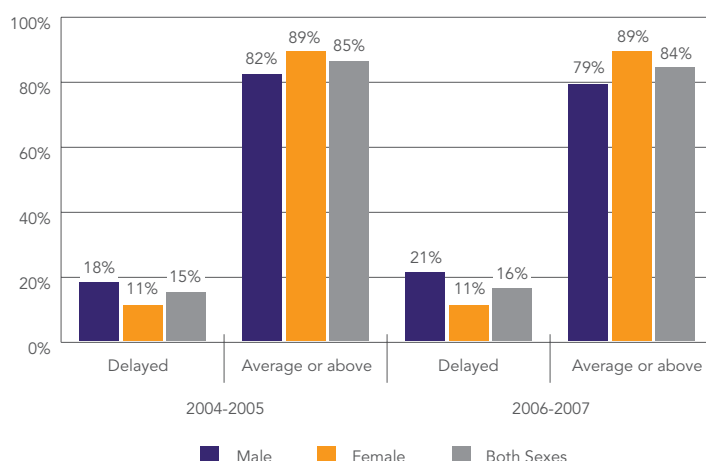
Indirect aggression

In 2006–2007, the proportion of children aged four to five that displayed high degrees of indirect aggression was 6%.²⁵ This finding is unchanged from 2004–2005.²⁶

Personal and social skills

In 2006–2007, 11% of girls aged three and younger demonstrated delayed development in personal and social skills compared to 21% of similarly aged boys.²⁷ Although the percentage of girls demonstrating delayed personal and social development has remained steady since 2004–2005 (11%), the proportion of boys with this type of delay has since increased, from 18%.²⁸

Figure 1.1: Personal and social skills of preschool children, aged three and younger^a, by sex, 2004–2005 and 2006–2007.



^a includes those aged 3-47 months

Source: Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth. Cycles 6 and 7, 2004–2005 and 2006–2007, special tabulation (unpublished data).

Early Childhood Education and Care

The environments a child experiences—from the home and the community to organized child care and educational settings—plays a role in their overall development. Child care outside the home is a reality for many young children.

Recent studies reveal that child-care arrangements, depending on the circumstances, can have advantages and disadvantages.²⁹ However, high-quality child care does appear to bring benefits for many children.³⁰

Child care

In 2006–2007, nearly half (49%) of children ages five and under were in some type of child-care arrangement such as

day care, nursery or preschool (or care by a relative or other caregiver) while their parents were working or studying.³¹ National data show that nearly 80% of preschool-aged children with working or studying mothers are in some form of regular non-parental child care or early childhood program, with almost 50% in an organized early childhood education and care (ECEC) program. However, data are not available that would indicate whether these arrangements meet parents' needs for care and are of a quality that is commensurate with early childhood education.³²

In 2008, the United Nations Children's Fund (UNICEF) published the first international study to rank the quality of ECEC programs, in terms of access, financing and policy, using measurable OECD benchmarks. Canada's provision of early childhood education and care ranked at the very bottom of 25 developed countries—similar to Ireland. Canada had achieved only one of 10 minimum standards.³³

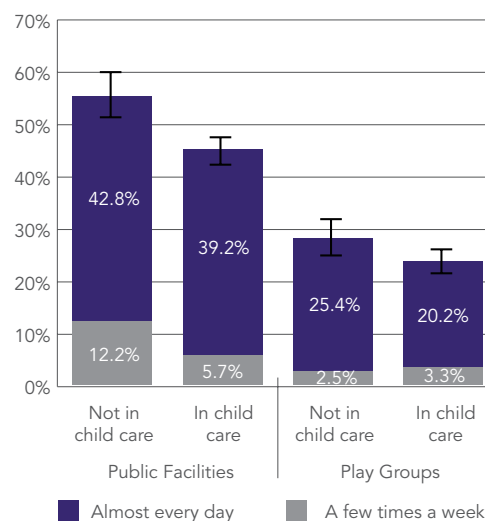
Data from CCL's 2008 *Survey of Canadian Attitudes toward Learning (SCAL)* suggested that parents of children aged five and younger regularly used some type of non-parental child care that included the following arrangements:³⁴

- a day-care centre (29%)
- care by a relative other than a parent (28%)
- care by a non-relative, in someone else's home (24%)
- care by a non-relative, in the child's home (10%)
- other types of non-parental child care (7%)

Data from the 2008 SCAL indicates that parents rely more on child care as their young children grow older. Fewer than 20% reported that their infants under age one were in care for 30 or more hours per week. However, after their children turned two, more than 40% of parents reported that their children were in care for at least 30 hours per week.³⁵

Results from the 2008 SCAL suggest that a higher proportion of parents whose children have not attended any form of child care, report taking their children to public facilities (e.g., libraries, museums and parks) and to organized play groups; compared with parents whose children regularly attend child-care services. These environments expose children to a variety of resources and activities that can help support learning.

Figure 1.2: Proportion of parents with and without children in child care, who participate in learning activities with their children outside the home, Canada, 2008.



Source: Canadian Council on Learning, 2008 *Survey of Canadian Attitudes toward Learning: Results for Learning throughout the Lifespan* (Ottawa: 2009).

EARLY CHILDHOOD LEARNING: RECENT CCL REPORTS (2008–2009)

Survey of Canadian Attitudes toward Learning (SCAL): Results for Learning throughout the Lifespan

This annual CCL survey provides a unique opportunity to gauge the opinions, perceptions and beliefs of Canadians about various aspects of learning in Canada. CCL's 2008 *Survey of Canadian Attitudes toward Learning: Results for Learning throughout the Lifespan* examined Canadians' attitudes, experiences and beliefs about learning during the early years and included information about experiences in child-care settings and in the home.

Available at: www.ccl-cca.ca/CCL/Reports/SCAL/

Lessons in Learning:

- "Ready to learn? A look at school readiness in young children" (Sept. 18, 2008)
- "Mixed messages: how to choose among conflicting information to support healthy development in young children" (May 29, 2008)

Available at: www.ccl-cca.ca

* These options were not mutually exclusive and respondents may have reported using any combination of child-care services.

NOTES:

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- ⁵ Statistics Canada, “National Longitudinal Survey of Children and Youth: school achievement of nine-year-olds, 2006,” *The Daily* (Nov. 24, 2008), www.statcan.ca/english/dai-quo/ (accessed Nov. 11, 2009).
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- ¹¹ Linnea C. Ehri, Simone R. Nunes, Dale M. Willows, Barbara Valeska Schuster, Zohreh Yaghoub-Zadh and Timothy Shanahan, “Phonemic awareness instruction helps children learn to read: evidence from the national reading panel’s meta-analysis,” *Reading Research Quarterly* 36, no. 3 (2001): 250–287. See also Stacey A. Storch and Grover J. Whitehurst, “Oral language and code-related precursors of reading: evidence from a longitudinal structural model,” *Developmental Psychology* 38, no. 6 (2002): 934–947.
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- ¹⁴ Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth. Cycles 1–7, 1994–1995 to 2006–2007, special tabulation (unpublished data).
- ¹⁵ Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth. Cycle 7, 2006–2007, special tabulation (unpublished data).
- ¹⁶ Statistics Canada, National Longitudinal Survey of Children and Youth. Cycle 6, 2004–2005, special tabulation (unpublished data).
- ¹⁷ Adapted from Statistics Canada, National Longitudinal Survey of Children and Youth. Cycle 7, 2006–2007, special tabulation (unpublished data).
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CHAPTER 2:

LEARNING IN SCHOOL

During the elementary and secondary school years, children and youth develop the skills and knowledge they need to become successful adults. These years (from age five to 18) also represent a critical period when children and youth develop attitudes about the value and purpose of learning and learn how to learn.

In school, Canadian youth develop skills in reading, mathematics, problem-solving and science that provide the foundation to enable them to participate successfully in post-secondary education (PSE) and the labour market. This foundation also determines the extent to which these individuals become engaged adult citizens capable of contributing to the well-being of their families, community and society.

KEY INDICATORS OF LEARNING IN SCHOOL

Student Skills

- Programme for International Student Assessment (PISA)
 - Top Performers
 - Environmental science
- Trends in International Mathematics and Science Study (TIMSS)

Use of Information and Communication Technologies (ICTs)

- E-learning

Citizenship Education

- Political participation
- Environmental awareness

Community and Civic Engagement

- Participation in extracurricular activities
- Volunteering
- Sense of belonging

Student Health and Safety

- General health
- Physical activity
- Eating breakfast
- Obesity
- School safety and bullying
- Cyber-bullying

High-school Dropouts

- Cost of dropping out

Student Engagement

- High school engagement and participation in post-secondary education.

Student Skills

In elementary and secondary school, Canadian youth develop basic skills in reading, mathematics, science and problem-solving. For this report, CCL relied on these international tests as measures of these skills; the OECD's *Programme for International Student Assessment (PISA)*, which assesses 15-year-old students in three subject areas—science, mathematics and reading, and the *Trends in International Mathematics and Science Study (TIMSS)*, which assesses the mathematics and science achievement of students in Grade 4 and Grade 8 around the world.

PISA 2006: Top performers

According to PISA 2006, top performers are defined as those students who, at age 15, can consistently identify, explain and apply scientific knowledge in a variety of complex life situations and develop arguments in support of recommendations and decisions that centre on personal, social, or global situations.³⁶

On average across the 30 OECD countries that participated in the assessment, 9% of 15-year-olds were top performers in science while 18% were top performers in at least one of three PISA subject areas—science, mathematics or reading. In Canada, 14% of students were top performers in science and 26% were top performers in at least one of the three PISA subject areas.³⁷

Across OECD countries, 4% of 15-year-old students were top performers in all three assessment subject areas, compared with 7% of Canadian students who participated in the assessment.³⁸

On average, 71% of top performers in Canada reported interest in pursuing a career in science compared to 61% of top performers in other OECD countries. Canadian students also reported more interest in studying science after secondary school (70% v. 56%), working on science projects as an adult (52% v. 47%), and spending their life doing advanced science (45% v. 39%) than their counterparts in other OECD countries.³⁹

* Top performers are proficient at Levels 5 and 6 on the 2006 PISA science scale; strong performers are proficient at Level 4; moderate performers are proficient at Levels 2 and 3; and the lowest performers, those who are at risk, are only proficient at Level 1 or below.

PISA 2006: Environmental sciences

Young people's knowledge, skills and attitudes toward environmental issues will be crucial in terms of a new generation's ability to respond to climate change and environment challenges. The 2009 PISA report, *Green at Fifteen: How 15-Year-Olds Perform in Environmental Science and Geoscience*, provided an assessment of the science competencies of 15-year-olds that offered the first comprehensive international comparison of students' knowledge of the environment and environment-related issues.⁴⁰

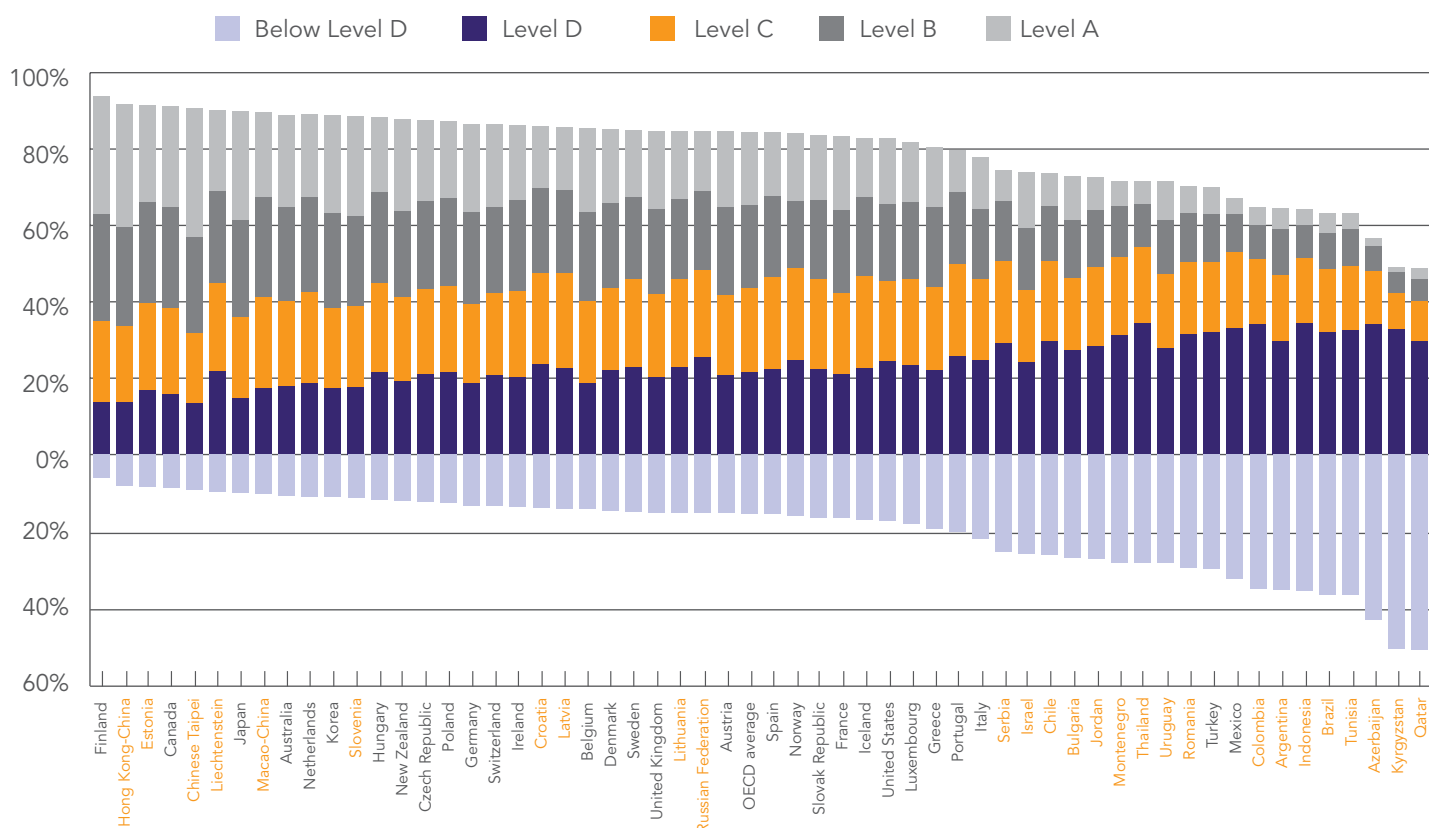
According to the report, across the OECD countries 19% of 15-year-olds performed at the highest (Level A) of four levels of proficiency in environmental science.*

The partner country of Chinese Taipei led with 34% of students performing at Level A, followed by Hong Kong-China (32%). OECD countries Finland (31%), Japan (28%) and Canada (26%) followed.⁴¹

While an average of 16% of students across OECD countries performed below Level D, only three OECD countries Japan (10%), Canada (9%) and Finland (6%)—had 10% or fewer students below Level D.⁴²

Across OECD countries, Finland had the highest average score (543) on the environmental science performance index, followed by Japan (529) and Canada (528).⁴³

Figure 2.1: Percentage of students at each proficiency level on the environmental science performance index.



Note: Countries are ranked in ascending order of percentage of 15-year-olds below Level D. Countries in orange are partner countries and economies, countries in grey are OECD countries.

Source: OECD, *Green at Fifteen? How 15-Year-Olds Perform in Environmental Science and Geoscience* (Paris: 2009).

* At the highest level of proficiency (Level A), students can consistently identify, explain and apply scientific knowledge to a variety of environmental topics. They can link different information sources and explanations and use evidence from those sources to justify decisions about environmental issues.

Trends in International Mathematics and Science Study (TIMSS)

The 2007 TIMSS reported on results from 59 countries and eight bench-marking participants.* In 2007, Canadian participation in TIMSS was limited to the provinces of Alberta, British Columbia, Ontario and Quebec. The study evaluated the mathematics and science skills of Grade 4 and Grade 8 students.

Mathematics

Hong Kong (SAR†) and Singapore were the top performing countries at the fourth grade followed by Chinese Taipei and Japan. On average, fourth-graders in the provinces of Quebec and Ontario achieved above the TIMSS average for mathematics.⁴⁴ Chinese Taipei, Korea, and Singapore had the highest average mathematics achievement at the eighth-grade level, followed by Hong Kong (SAR) and Japan. However, Grade 8 students in Quebec, Ontario and British Columbia, on average, achieved above the TIMSS average.⁴⁵

On average, there was no difference in mathematics achievements between fourth-grade boys and girls across the TIMSS countries. However, in British Columbia, Quebec and Alberta math scores for fourth-grade boys were higher than for girls. On average, eighth-grade girls across TIMSS countries had higher math achievement than boys. In Canada, math scores for eighth-grade boys were higher than for girls in British Columbia and Ontario.⁴⁶

Science

In science achievement for Grade 4 students, Singapore had the highest average TIMSS score followed by Chinese Taipei and Hong Kong SAR. Fourth-grade students in Alberta, British Columbia, Ontario, and Quebec performed above the international TIMSS average.⁴⁷

At the Grade 8 level, Singapore and Chinese Taipei had the highest average achievement in science followed by Japan and Korea. Eighth-grade students in Ontario, British Columbia, and Quebec performed above the TIMSS average.⁴⁸

Average science achievement at the fourth grade was higher for girls than for boys across the participating countries. Provinces tested showed no statistically significant gender difference in achievement levels. At the eighth grade, on average across the TIMSS 2007 countries, girls had higher average science achievement than boys. Eighth-grade boys in Canada, however, had higher science achievement than eighth-grade girls in British Columbia and Ontario.⁴⁹

Use of Information and Communication Technologies (ICTs)

Canada's younger generation is well positioned to exploit the potential of learning technologies. ICT's such as computers, multimedia programs, chat rooms and other manifestations of the digital age are now common throughout children's developmental years—as almost any parent or educator will attest.⁵⁰

Young Canadians use the internet regularly to learn. PISA data from 2006 suggest that 31% of 15-year-old students in Canada used a computer almost daily to search the internet for information; above the OECD average of 25%.

According to Statistics Canada more than 1 million computers were available to 5.3 million students in elementary and secondary schools across Canada in 2003–2004. This represents approximately one computer for every five students; better than the 1:13 average ratio among OECD countries.⁵¹

E-learning

Using technology to learn can substantially increase access to knowledge and information and may improve access to education, formal and informal learning, and employment opportunities.

In 2003–2004, 36% of secondary schools and 3% of elementary schools across Canada had students participating in electronic or online courses.⁵² Across Canada, 9% of secondary schools and 1.5% of elementary schools who had students participating in online courses were doing so through a virtual school.⁵³

* TIMSS 2007 reported fourth-grade mathematics and science results for 37 countries and seven benchmarking participants (including Alberta, British Columbia, Ontario and Quebec), and results at the eighth grade for 50 countries and seven benchmarking participants (including British Columbia, Ontario and Quebec). The provinces followed rigorous quality standards; their results, therefore, can be used as benchmarks, making provincial data comparable to that of participating countries.

† Special Administrative Region

Citizenship Education

Individuals and society benefit from an informed and engaged citizenry. A grasp of history and politics helps young people understand their rights and responsibilities as members of a democracy. History and civic education in school is especially important in a culturally diverse population because it unites Canadians around a shared knowledge of their country.

Citizenship education often reflects prevailing societal views about important issues—i.e., political participation, environmental sustainability and social cohesion.⁵⁴

Political participation

Statistics Canada's 2008 General Social Survey (GSS) indicates that the proportion of youth aged 18 to 24 who voted in the last election was 44% for federal, 43% for provincial and 31% for municipal.⁵⁵

Environmental awareness

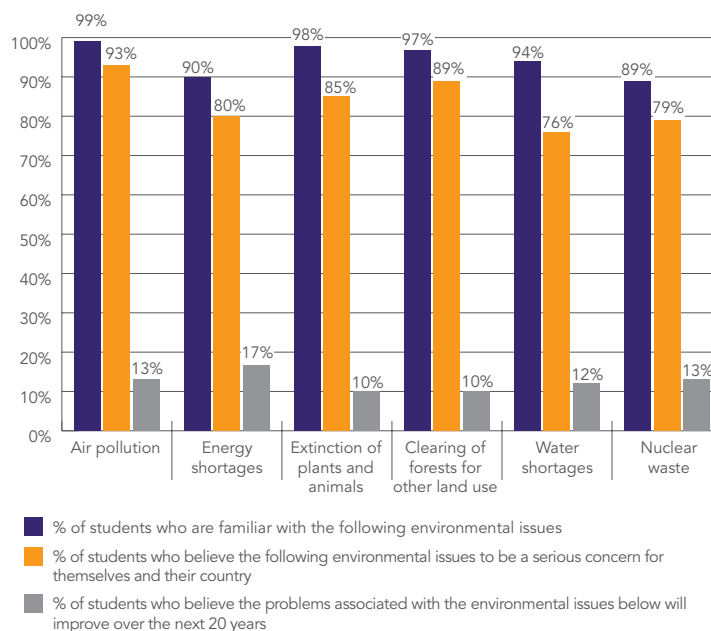
Schools can help students make connections between the science they learn in class and real world problems, enabling them to develop realistic attitudes about solution strategies. According to the 2006 PISA, schools appear to play a central role for learning about environmental issues.

Canadian 15-year-olds reported that they learned about the environment mainly from school, followed by the media, then the internet and books, and lastly, family and friends.⁵⁶

In Canada, 29% of students attend schools that offer a course specifically on environmental topics and 98% of these students can study environmental topics as part of a natural science course, 72% as part of a geography course and 62% as part of another course.⁵⁷

The majority of 15-year-old students in Canada report a sense of personal and social responsibility toward environmental issues. However, only a minority of students (on average between 13% and 17%) believed that problems associated with environmental issues would improve in the next 20 years.⁵⁸

Figure 2.2: Knowledge of, and attitudes about, environmental issues, 15-year-olds, Canada, 2006.



Source: OECD, *Green at Fifteen? How 15-Year-Olds Perform in Environmental Science and Geoscience* (Paris: 2009).

Community and Civic Engagement

Participation in community organizations, volunteering in the community and a sense of belonging are recognized as measures of community and civic engagement—and are also important to our understanding of learning in the school years.

Participation in extracurricular activities

Participation in extracurricular activities has been associated with positive outcomes (such as academic achievement and pro-social behaviours) and has also been shown to reduce negative outcomes, such as dropping out of school and emotional and behavioural disorders.⁵⁹

According to the 2008 SCAL, 67% of Canadians aged six to 17 had participated in extracurricular activities over the 12-month period prior to the survey. Of this group, 82% had taken part in sports, 39% had taken part in science or activities that involved computers or multimedia programs, 34% had participated in youth groups (such as Girl Guides, Scouts or 4-H) or other community or religious groups, while 35% participated in other types of extracurricular activity.⁶⁰

Volunteering

According to Statistics Canada, in 2007 nearly two-thirds (65%) of Canadian youth aged 15 to 19 volunteered in the community—a similar rate to the proportion in 2004.⁶¹ However, the average annual hours volunteered by youth declined from 127 hours in 2004, to 116 hours in 2007, a decrease of nearly 10%.⁶²

Young Canadians are more likely to perform mandatory community service, often as requirement to graduate from high school, 16% of Canadian youth aged 15 to 19 who volunteered in 2007 were required to volunteer for the organization to which they contributed the most hours.⁶³

Youth aged 15 to 19 years volunteered for a variety of organizations—28% volunteered for education and research organizations, 15% for sports and recreation organizations and 15% for social services organizations.⁶⁴

Sense of belonging

Results from Statistics Canada's 2008 Canadian Community Health Survey indicate that more than three-quarters (76%) of Canadian youth aged 12 to 19 reported having a "very strong" or "somewhat strong" sense of belonging in their local community; a slight increase from 2003 (73%).⁶⁵

Student Health and Safety

Studies have shown that children and youth learn better in the classroom when they are healthy and feel safe. The physical and mental health of students plays a significant role in their ability to learn at school.

General health

General good health entails the absence of disease or injury, but it also includes physical, mental and social well-being. There are numerous ways to measure students' general overall health, including objectively measured data and self-perception assessments.

In 2008, more than two-thirds (69%) of Canadian youth aged 12 to 19 perceived themselves to be in "very good" or "excellent health," a slight increase from 67% in 2003.⁶⁶

The percentage of young Canadians in this age group who perceived themselves to be in "fair" or "poor health" was 5% in 2008, which was unchanged from 2003.⁶⁷

In 2008, the percentage of Canadians aged 12 to 19 who perceived their mental health to be "very good" or "excellent" increased slightly to 79%, from 76% in 2003. The percentage who perceived their mental health to be "fair" or "poor" was 3% in 2008, which was unchanged from 2003.⁶⁸

Physical activity

Involvement in physical activity and sports influences a young person's health and well-being, builds their social networks and their sense of social connectedness. Organized sport can help children develop a sense of achievement while building teamwork, leadership, problem-solving, decision-making and communication skills.

The 2009 study *Canadian Physical Activity Levels Among Youth*, published by the Canadian Fitness and Lifestyle Research Institute, found that 87% of Canadian youth aged five to 19 were not meeting Canada's physical activity guidelines of 90 minutes of physical activity a day.⁶⁹

However, improvements have been made in recent years. The proportion of children and youth meeting the guidelines increased from 9% in 2005–2006 to 13% in 2007–2008.⁷⁰

According to a 2008 Statistics Canada report, in 2005 more than half (51%) of Canadians aged five to 14 regularly took part in sports during the previous 12 months. Approximately 51% participated in more than one sport and on average participated in sports activities about 2.6 times per week per sport during their sport's season.⁷¹

Eating breakfast

Children who skip a nutritious breakfast tend to have trouble concentrating at school. According to the research, many Canadian students skip breakfast, which could have an impact on their ability to learn in school.

The 2008–2009 Census at School showed that 91% of elementary school students and 80% of secondary students reported eating breakfast. Among these groups, girls were more likely to report not eating breakfast (11% and 21%).⁷²

Obesity

Pediatric obesity in Canada has increased to such an extent in the past 10 to 15 years that it now represents the most common lifestyle-related disease affecting children and youth.⁷³

According to the Canadian Health Measures Survey, the most comprehensive national survey of fitness and obesity levels in Canada in 20 years, teen boys in the age group 15 to 19 who were classified as overweight or obese rose from 14% to 31% between 1981 and 2009. Among teen girls, in the same age group, it increased from 14% to 25%.⁷⁴

Among boys, the proportion in the waist circumference category who were at increased risk of health problems, or high-risk, rose more than five-fold from less than 3% to 15%. Among girls, this proportion tripled from 9% to 28%.⁷⁵

School safety and bullying

Bullying can lead to many students feeling unsafe in their schools and may result in disengagement from the school experience. According to the 2008–2009 Census at School, more than one in three Canadian elementary students (35%) reported being bullied at least once in the month prior to the survey, while nearly one in four high school students (23%) reported being bullied at least once.⁷⁶

Cyber-bullying

With the increased prevalence of ICTs, cyber-bullying (i.e., the use of new technologies—such as email, text messaging and the internet—to intimidate others) is becoming more of an issue.

A 2008 University of Toronto study indicated that one-fifth (20%) of students surveyed in grades 6 and 7 reported they had been the victim of cyber-bullying, while nearly one-third (29%) reported having cyber-bullied others online in the previous three months.⁷⁷

High-School Dropouts

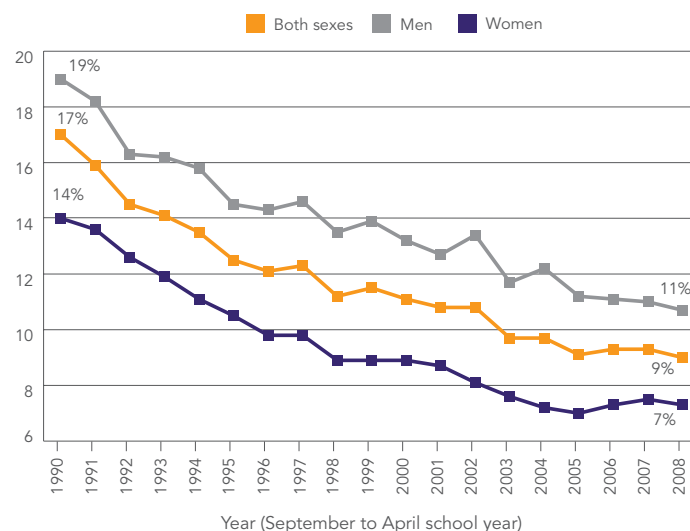
Research has well demonstrated that high-school graduates are more employable, have a wider selection of jobs to choose from and earn more money than those who leave school before getting their diploma.

Since the 1990–1991 school year, Canada's high-school dropout rate has decreased by almost half, falling from nearly 17% to 9% in 2008–2009. Although the national rates have declined, the dropout rate for males remains higher than for females.⁷⁸

Between 1990 and 2008, 20- to 24-year-old Canadian males had consistently higher dropout rates than females in the same age range. In the 2008–2009 school year,

the dropout rate for 20- to 24-year-old males was 11% compared with 7% for young women.⁷⁹

Figure 2.3: High-school dropout rate, 20- to 24-year-olds, by sex, Canada, 1990–1991 to 2008–2009.



Source: Statistics Canada, Labour Force Survey (Ottawa: 2009).
Special data run for the Canadian Council on Learning.

Cost of dropping out

According to research commissioned for CCL in 2009, non-completion of high school has enormous fiscal implications in terms of expenditures on social services and programs, education, employment and criminality. It can also affect economic productivity and health.

High-school dropouts cost Canada's social assistance programs and the criminal justice system more than \$1.3 billion annually.⁸⁰ The public cost of social assistance amounts to an average of \$4,000-per-year for each person who drops out of high school, or a total of \$969 million. Costs to the criminal justice system total an average of \$220 per dropout—or \$350 million a year.⁸¹

Canadians who drop out of high school can expect to earn at least \$3,000 less a year than those who have graduated from high-school but not continued on to post-secondary education.⁸² As well, those who quit high school lose also about \$8,000 a year due to poor health, resulting in lost income due to illness and health-related expenses.⁸³

Student Engagement

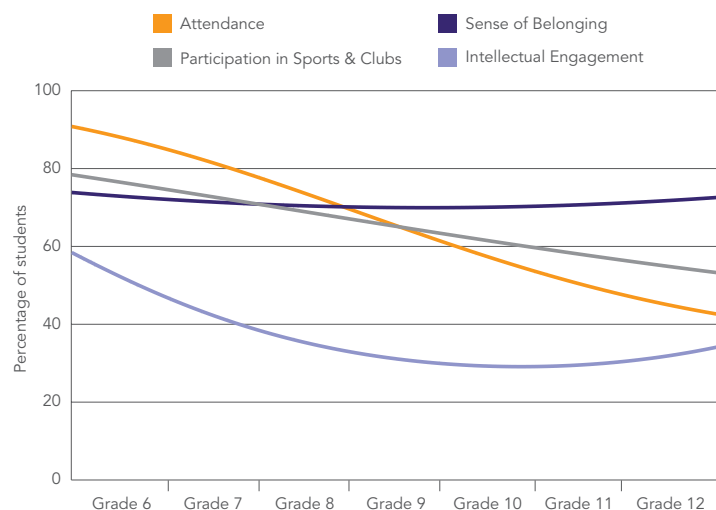
Engagement with the school experience is a significant factor in reducing the likelihood of dropping out. Students with positive social and academic interactions are more likely to participate in post-secondary education. The number of hours spent on homework, attitudes about the value of education, and a sense of belonging contribute to students' overall experience of high school and the likelihood that they will pursue post-secondary education.⁸⁴

Findings from the Canadian Education Association report *What Did You Do in School Today?*,⁸⁵ which studied student engagement among youth in Grade 5 to Grade 12, indicated that:

- 67% of students participated in at least one school club or sport and 71% had a positive sense of belonging at school.
- 69% of students had positive records of school attendance.
- 37% of students were intellectually engaged in their language arts and mathematics classes, the only two subject areas studied.⁸⁶

The study also found that levels of participation and academic engagement fall steadily from Grade 6 to Grade 12, while intellectual engagement falls during the middle school years of this period and remains at a low level throughout secondary school.⁸⁷ School attendance* decreases from a high of 90% in Grade 6 to a low of about 40% by Grade 12. The fall in student attendance parallels the fall in intellectual engagement through to about Grade 9, where intellectual engagement then remains at a fairly constant level at slightly above 30%.⁸⁸

Figure 2.4: Percentage of students with a positive sense of belonging in grades 6 through 12.



Source: J. Douglas Willms, Sharon Friesen and Penny Milton, *What Did You Do in School Today? Transforming Classrooms through Social, Academic and Intellectual Engagement*, First National Report (Toronto: Canadian Education Association, 2009).

High-school engagement and participation in post-secondary education

A positive high school experience can be an important factor for future engagement in post-secondary education.⁸⁹

In all forms of post-secondary education, students reporting higher level of high-school engagement were more likely to have graduated by ages 24 to 26. In contrast, those reporting lower levels of high-school engagement were much more likely to drop out.

* The measure of school attendance is based on the frequency during the previous month that students skipped classes or missed days at school without a reason, or arrived late for school or classes.

Table 2.1: Post-secondary status of young adults aged 24 to 26 by December 2005, by high-school engagement and type of institution attended.

	General high-school engagement				Time spent on homework in high school		Ever dropped out of high school	
	Canada	Very Engaged	Engaged	Not very Engaged	Three hours or less	More than three hours	Ever dropped out	Never dropped out
Status	%	%	%	%	%	%	%	%
University								
Graduates continuers	16	21	15	8 ^E	12	17	X	16
Graduates	53	55	54	39	44	56	F	54
Continuers	15	12	15	29	19	14	54	14
Dropout	16	12	17	24	25	13	27 ^E	16
College/CEGEP								
Graduates continuers	2	2 ^E	3	F	2 ^E	2	X	2
Graduates	65	79	63	58	60	69	34	68
Continuers	8	4 ^E	8	12 ^E	8	7	21 ^E	6
Dropout	25	16	26	30	30	21	43	23
Other Institution								
Graduates continuers	2	F	2 ^E	F	3 ^E	2 ^E	F	3
Graduates	62	66	63	56	64	62	58	63
Continuers	13	15 ^E	12	13 ^E	10	15	12 ^E	13
Dropout	22	18 ^E	22	26	23	21	29	21

Notes:

X = suppressed by Statistics Canada to meet confidentiality requirements

E = use with caution

F = too unreliable to be published.

Source: Danielle Shaienks, Tomasz Gluszynski and Justin Bayard, *Postsecondary Education – Participation and Dropping Out: Differences Across University, College and Other Types of Postsecondary Institutions*, Catalogue no. 81-595-M, no. 70 (Ottawa: Statistics Canada, Nov. 3, 2008).

LEARNING IN SCHOOL: RECENT CCL REPORTS (2008–2009)

State of E-Learning in Canada (2009)

This report affirms that e-learning holds much promise to improve Canada's economic competitiveness and prepare Canadians for the demands of the 21st century.

Access to learning technologies in elementary and secondary schools can open up a wide range of opportunities and enable more effective learning and teaching.

Available at:
www.ccl-cca.ca/CCL/Reports/StateELearning

Survey of Canadian Attitudes toward Learning (SCAL): Results for Learning throughout the Lifespan

This CCL survey provides a unique opportunity to gauge the opinions, perceptions and beliefs of Canadians about various aspects of learning in Canada. The 2008 report, *Survey of Canadian Attitudes toward Learning: Results for Learning throughout the Lifespan*, reveals the complexity of Canadians' attitudes toward structured learning in Canada's elementary and secondary schools.

Available at: www.ccl-cca.ca/SCAL

Lessons in Learning

- "Effective literacy strategies for immigrant students" (September 2009)
- "Minority francophone education in Canada" (August 2009)
- "Learning about sex and sexual health" (July 2009)
- "Making the environmental grade: the benefits of going green in the classroom" (June 2009)
- "Promising practices in primary mathematics instruction" (June 2009)
- "Homework helps, but not always" (May 2009)
- "A barrier to learning: mental health disorders among Canadian youth" (April 2009)
- "Does placement matter? Comparing the academic performance of students with special needs in inclusive and separate settings" (March 2009)
- "Why boys don't like to read: gender differences in reading achievement" (February 2009)

- "No "drop" in the bucket: the high costs of dropping out" (February 2009)
- "Changing our schools: implementing successful educational reform" (January 2009)
- "The replacements—non-permanent teachers" (November 2008)
- "Parlez-vous français? The advantages of bilingualism in Canada" (October 2008)
- "Understanding the academic trajectories of ESL students" (October 2008)
- "Ready to learn? A look at school readiness in young children" (September 2008)

Available at: www.ccl-cca.ca/LessonsInLearning

CCL commissioned reports include:

- ABRACADABRA (July 2009)
- Educational Pathways and Academic Performance of Youth of Immigrant Origin: Comparing Montreal, Toronto and Vancouver (May 2009)
- What did you do in school today? (May 2009)
- Rural Education: A Review of Provincial and Territorial Initiatives 2009 (March 2009)
- From Risk to Resilience (February 2009)
- Cost Estimates of Dropping Out of High School in Canada (December 2008)
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CHAPTER 3:

POST-SECONDARY EDUCATION

Post-secondary education (PSE) refers to academic, technical and vocational programs and courses taken beyond the secondary-school level. The majority of Canada's PSE sector is provided through publicly funded institutions such as colleges, Collèges d'enseignement général et professionnel (CEGEPs), universities and university colleges. Graduates from PSE programs receive diplomas, certificates or degrees (undergraduate or graduate).⁹⁰

In Canada, PSE is a complex arrangement of various institutions and processes across 13 provinces and territories. Each jurisdiction structures its approach to public PSE institutions somewhat differently. While the majority of learners who enrol in post-secondary education are aged 18 to 27, some adults return to post-secondary studies later in life to improve their knowledge and skills.

In 2002, the Organisation for Economic Cooperation and Development (OECD) noted that rising skill demands have made attainment of a PSE qualification "a minimum for successfully entering the labour market and a basis for further participation in lifelong learning."⁹¹ In addition, it cautioned that younger people with lower educational qualifications "run a higher risk of long-term unemployment or unstable or unfulfilling employment, which can have additional consequences such as social exclusion."⁹²

KEY THEMATIC AREAS RELATED TO PSE

From Access to Attainment

- College enrolment and graduates
- University enrolment and graduates
- Registered apprenticeship training programs: registrations and completions

Under-represented Groups and Gender Disparities in PSE

Lifelong Learning and PSE

Affordable and Sustainable PSE

Innovation, Knowledge Creation and Knowledge Transfer

Active, Healthy Citizenry

A Skilled and Adaptable Workforce

Quality Assurance in PSE

Since 2006, CCL has published annual reports exploring the state of PSE in Canada. These reports use a series of detailed indicators organized into eight thematic areas, which were initially derived from provincial and territorial strategic plans for post-secondary education.

This chapter is modelled after—and includes data from—CCL's third annual PSE report, *Post-Secondary Education in Canada: Meeting Our Needs?* which was published in February 2009. Data updates have been provided where applicable.

From Access to Attainment

The process of completing PSE is a long-term undertaking that involves careful planning, numerous decisions and commitment. Despite Canada's well-developed PSE sector, evidence shows that while many Canadians attain a PSE credential, Canada is not maximizing the education potential of a substantial number of its citizens.

Access to post-secondary programs in Canada usually requires the completion of prerequisites, the most fundamental of which is a high-school diploma or certificate. According to Statistics Canada, one million Canadians aged 25 to 44 had not graduated from high school in 2006.⁹³

According to the OECD's *Education at a Glance (2009)*, the Canadian graduation rate in 2006 was 79%; slightly below the OECD average of 81% and the European Union (EU) average of 83% for that year.⁹⁴

The ability of parents and their children to meet PSE costs is fundamental to attendance.

According to Statistics Canada's Access and Support to Education and Training Survey (ASETS), more than two-thirds (68%) of those 17-years-old and younger had parents who saved for their PSE studies. Of those 69% had savings in the form of a Registered Education Savings Plan (RESP).⁹⁵

The proportion of children and youth with savings for PSE has increased over time, up from 43% in 1999 and 52% in 2002. Among those with savings, the proportion with RESPs increased as well, from 42% in 1999 to 55% in 2002.⁹⁶

Students aged 17 and under who were performing well in school were much more likely to have education savings. In 2008, nearly three-quarters (73%) of students whose last grade in school was above 90% had education savings, compared to 37% for those whose last grade in school was less than 50%.⁹⁷

Parental aspirations also appear to affect PSE savings. In 2008, 70% of students aged 17 and under whose parents intended for them to attend university had education savings, compared to around half (50%) of students of the same age whose parents expected them to attend college or pursue a trade.⁹⁸

Similarly, in 2008 children whose parents were PSE graduates were almost twice as likely to have education savings than those children whose parents had not graduated high school (72% vs. 37%).⁹⁹

According to a 2009 report that investigated access to PSE among the children of immigrants in Canada, first- and second-generation immigrants were more likely than non-immigrant Canadians to participate in PSE; when they did participate, they were more likely than non-immigrant Canadians to attend university rather than college.¹⁰⁰

Close to one in four (38%) of non-immigrant Canadians participated in university compared with 57% and 54% for first- and second-generation immigrants, respectively.¹⁰¹

However, non-immigrant Canadians (34%) were more likely to go to college than immigrants (29%).¹⁰² Overall PSE participation rates of those born in Africa, China and other Asian countries (first-generation immigrants) exceeded 90%; these differences were mostly driven by higher university attendance rates.¹⁰³ Students from China also had the highest participation rate with 88% attending university and 10% attending college. Roughly over 1% did not attend any form of PSE.¹⁰⁴

After completing high school, graduates face an important decision about whether to enter the labour market or pursue post-secondary education. A number of factors affect this decision including the lure of employment in a strong economy, perceived barriers to PSE participation and distance to a post-secondary institution.

Many young Canadians are participating in and completing post-secondary programs along different pathways than students from previous years. Some students still follow the traditional linear path through PSE, while many follow less direct routes, which can include attending more than one post-secondary institution or switching programs of study.

Results of Statistics Canada's 2007 National Graduates Survey* —a survey of post-secondary graduates —indicated that a higher proportion of 2005 graduates followed an

indirect pathway to, and through, their post-secondary studies compared with graduates from the Class of 2000.

Approximately one-half of the graduates surveyed did not enter PSE directly from high school.¹⁰⁵ In addition, more 2005 graduates had pursued previous post-secondary studies.

According to the survey:

- The proportion of college graduates with previous post-secondary participation was 45% in 2005; an increase from 35% in 2000.¹⁰⁶
- The proportion of university graduates (with bachelor degrees) outside of Quebec† with previous PSE experience was 37% in 2005; an increase from 32% in 2000.¹⁰⁷
- The proportion of 2005 graduates who pursued further education was 36% in 2005, an increase from 33% in 2000. This increase was primarily due to the increased proportion of college graduates (31%) who continued their studies—an increase from 26% in 2000.¹⁰⁸

According to Statistics Canada, the proportion Canadians aged 25 to 64 with PSE qualifications has increased significantly over the past decade-and-a-half, from 43% in 1993 to 61% in 2008.¹⁰⁹

The OECD's *Education at a Glance (2009)* indicates that Canada placed 20th with a 31% graduation rate for type A tertiary-level programs (bachelor's and master's level in Canada), below the OECD average of 39% and the EU average of 37%.^{** 110}

College enrolment and graduates

According to Statistics Canada, in the 2005–2006 academic year there were 531,972 full- and part-time students enrolled in certificate, diploma and degree programs at Canadian colleges.^{111 † † †}

Between 2000–2001 and 2005–2006, college enrolment in certificate, diploma and degree programs increased on average 0.7% per year.¹¹²

* The National Graduates Survey examines the labour market experiences of graduates from Canadian public universities, CEGEPs, community colleges and trade/vocational programs.

† The proportion of bachelor's graduates in Quebec with previous post-secondary studies remained stable. This is to be expected because the education system in Quebec requires that students complete a two-year college program as a prerequisite for university entrance.

** Canada's year of reference is 2006, while the OECD and EU average is for 2007.

†† These institutions include public colleges of applied arts and technology, technical institutes, CEGEPs and similar institutions.

‡ Enrolments for colleges and universities are reported for the academic year, based on counts in the fall of that year. Total numbers of graduates are reported by academic year for colleges, and by calendar year for universities.

During the 2004–2005 academic year, 161,300 students graduated from Canada's colleges, up from 138,063 in 2000–2001 for an average annual increase of 4%.^{113, 114}

According to Statistics Canada, physical and life sciences, and technologies category accounted for 23% of college graduates in 2004–2005, while humanities accounted for 18% and health, parks, recreation and fitness accounted for 15%.¹¹⁵

University enrolment and graduates

According to Statistics Canada, in the 2007–2008 academic year there were more than 1 million (1,066,000) students enrolled in Canadian universities; an increase of 0.6% from the previous academic year.

In the 2007–2008 academic year 812,700 of university students were enrolled in undergraduate programs; a decrease of 0.1% from the previous year. About 101,000 students were enrolled in a master's program, an increase of 5% from the previous year, while enrolment at the doctorate level was 40,400 representing a similar increase of 5% from the previous year.¹¹⁶

In 2007, approximately 241,600 students graduated from a Canadian university; an increase of 7% from 2006.¹¹⁷ Within this group of graduates, about 61%, or 146,700, were female.

In 2007, 195,200 graduates were from the undergraduate level, about 34,800 were at the master's level and 4,800 were at the doctorate level.

Two fields of study* had the highest numbers of university graduates in Canada in 2007: social and behavioural sciences, and law; and business, management and public administration.¹¹⁸

Registered apprenticeship training programs: registrations and completions

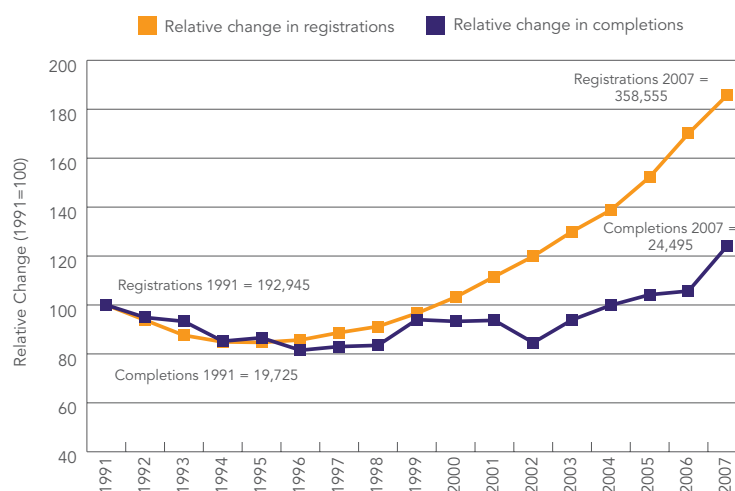
Apprenticeship training is a well-established approach to learning and involves alternating periods of in-class education and on-the-job training. Colleges deliver the classroom portion of training to students.

In 2007, there were 358,555 people registered in apprenticeship training programs; an increase of 9% from the previous year—and more than double the level recorded a decade before, in 1997.¹¹⁹

Women accounted for about 1 in 10 apprentices (38,070) in 2007. Of this group, more than half (55%) were in food and services trades programs, while 1% were enrolled in industrial and mechanical trades.¹²⁰

In 2007, 24,495 Canadians completed apprenticeship training, a one-year increase of 17% and the fastest yearly rate of growth in the last 10 years. About 2,780, or 11%, were women.¹²¹

Figure 3.1: Relative change in registrations and completions in apprenticeship training programs, Canada, 1991–2007.



Source: Statistics Canada, Registered Apprenticeship Information System (RAIS) 2007, CANSIM Tables 477-0051 and 477-0052 (Ottawa).

Under-represented Groups and Gender Disparities in PSE

Canada needs to maximize the education potential of all its citizens, including those groups considered to be at risk—typically those in living in rural areas, Aboriginal people and those from families with low incomes and low parental education. Opportunities to attend post-secondary education are considerably less for these groups than for the general population.

Non-completion of high school impedes many rural students' access to a post-secondary education. During 2006–2009, the average high-school dropout rates for

* According to Statistics Canada, a field of study refers to a discipline or area of learning or training. Each field of study groups together instructional programs according to the Classification of Instructional Programs 2000, the official classification used by Statistics Canada.

small towns and rural areas in Canada were 14% and 16% respectively—nearly double the rate of large cities, which was 8%.¹²²

Education is an increasingly important issue for First Nations, Inuit and Métis communities, in large part because nearly half (48%) of all Aboriginal people in Canada are under the age of 25. Of particular concern over the last several decades has been the consistent under-representation of Aboriginal people in PSE, especially at university. However, a growing number of Aboriginal people are completing PSE.

In 2006, an estimated 44% of Aboriginal people aged 25 to 64 had completed a post-secondary certificate, diploma or degree compared with 61% of the non-Aboriginal population.^{*123}

In 2006, 8% of the Aboriginal population had a university credential compared to 23% of the non-Aboriginal population.¹²⁴

Aboriginal people were on more equal footing with their non-Aboriginal counterparts in terms of college attainment (19% and 20%, respectively) and trades (14% and 12%).¹²⁵ *For a more detailed look at Aboriginal learning in Canada, please see Chapter 5.*

Students from low-income families are less likely to pursue a post-secondary education. In 2006, 59% of Canadians aged 18 to 24 from low-income families (those households earning less than \$25,000 per year) participated in PSE, compared to 81% of similarly aged Canadians from families with household incomes of more than \$100,000.¹²⁶

There was a 21 percentage-point difference in participation at the university level between students from the lowest income group and those at the highest income level in 2006.¹²⁷

College and CEGEP participation levels were more equal across income groups, with 40% of Canadians aged 18 to 24 from the lowest income group (less than \$25,000) participating compared to 44% of similarly aged Canadians from the highest income group (more than \$100,000).¹²⁸

Gender disparities can be found at all levels of education, however the underlying factors behind these differences have not been clarified.

Gender disparities in educational attainment are apparent during the secondary school years. In the 2008–2009 school year, the high-school dropout rate for young men was 11% compared to 7% for young women.¹²⁹

There are clear differences in PSE behaviours between the genders. In 2007, males accounted for nine out of 10 of all apprenticeship completions, while females made up six in 10 undergraduate completions at the university level.¹³⁰

Lifelong Learning and PSE

Lifelong learning is closely tied a number of economic and social benefits: adaptability of labour-market participants, innovation, re-tooling of the labour market (in response to structural changes in the economy), active and healthy citizenry, and maximization of personal potential throughout the life cycle.

Results from Canada's Lifelong Learning Plan (LLP)—a federal program that allows Canadians to make tax-free withdrawals from their Registered Retirement Savings Plans (RRSPs) to pay for their or their spouse's education†—suggests that adults who are beyond the traditional age for formal education are increasingly becoming interested in PSE.

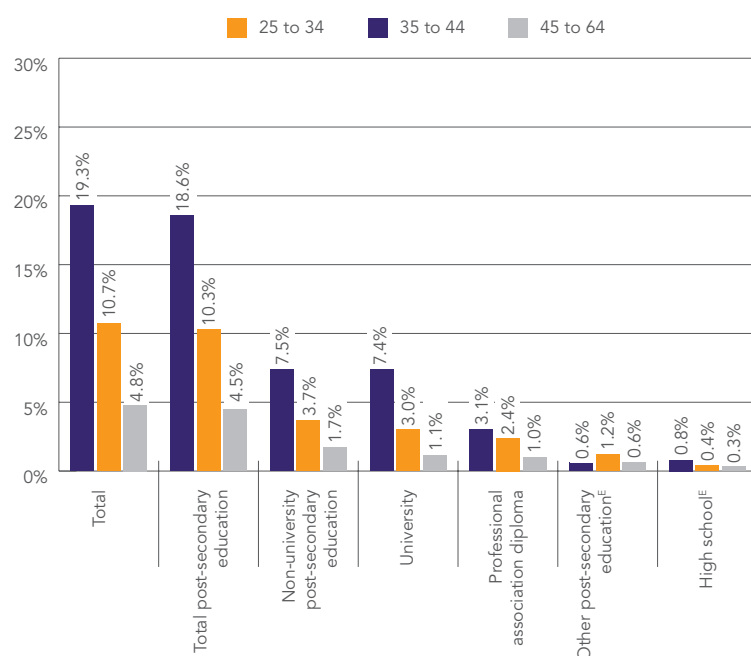
In 2004, 12,300 individuals made withdrawals from their RRSP under the LLP; a 12% increase from 2002.¹³¹ In 2004, total withdrawals made under the LLP amounted to \$71 million; an increase of 18% from 2002 when withdrawals totalled \$60 million.¹³²

According to Statistics Canada's Access and Support to Education and Training Survey (ASETS), in 2008 almost one-fifth (19%) of Canadians aged 25 to 34 participated in an education program, while 11% of those aged 35 to 44 and 5% of those aged 45 and older did so.¹³³ (The majority of those surveyed reported that they were pursuing a post-secondary education).

* Includes individuals who received a University certificate or diploma below a bachelor's level.

† As stipulated in the list of schools maintained by the Canada Student Loan Program of Human Resources and Skills Development Canada. These withdrawals do not jeopardize the income-tax deferment already accrued under the RRSP plan, although the amount withdrawn must be repaid to the RRSP within a certain time frame.

Figure 3.2: Proportion of Canadians aged 25 to 64 who participated in education programs, by age range, educational institution, 2008.



Note(s):

^E use with caution

Source: Tamara Knighton, Filsan Hujaleh, Joe Iacampo and Gugsu Werkneh, *Lifelong Learning Among Canadians Aged 18 to 64 Years: First Results from the 2008 Access and Support to Education and Training Survey* (Ottawa: Statistics Canada, 2009), Catalogue no. 81-595-M, no. 79.

The 2003 Adult Education and Training Survey shows that as adults get older and gain more experience in the labour force, their reasons for pursuing formal job-related education change.¹³⁴

Canadians workers aged 25 to 34 were the most likely (62%) to pursue PSE as a means of finding or changing a job, compared with 42% of Canadians aged 45 to 54.¹³⁵ Pursuing post-secondary in order to improve performance on the job increased in older age groups; more than half (56%) workers aged 45 to 54 cited this as their prime reason.¹³⁶

Table 3.1: Reasons for pursuing post-secondary education, by age range, Canada, 2002.

Reason	25–34 years	35–44 years	45–54 years	All, 25–54 years
Increase income	48.5%	37.5%	33.8%	43.0%
Keep job	9.5%	11.7%	14.4%	10.9%
Promotion	18.2%	18.8%	20.0%	18.7%
Do job better	43.5%	52.5%	55.7%	48.1%
Own business	20.9%	11.4%	6.8%	15.8%
Find/change jobs	62.1%	41.4%	42.4%	52.6%
Other	11.8%	13.1%	14.9%	12.7%

Source: : Karen Myers and Patrice de Broucker, *Too Many Left Behind: Canada's Adult Education and Training System*, Research report W34 (Ottawa: Canadian Policy Research Networks, 2006). Calculations by Myers and de Broucker.

Affordable and Sustainable PSE

Canadians must be able to afford the costs associated with participation in PSE and the sector must be cost-effective and sustainable to ensure its future vibrancy and pertinence.

Responsibility for financing Canada's public post-secondary education system is shared by those with a vested interest in its benefits; various levels of government and the learners themselves. Federal, provincial, territorial and local governments all invest in public education with the understanding that it provides social and economic benefits and helps to ensure that there are qualified workers to meet the economic demand.

In 2006–2007, all levels of government invested a total of \$32.1 billion in Canada's PSE sector, a significant increase from the \$20.9 billion invested in 1995–1996.¹³⁷

In 2004–2005, combined public and private expenditures on PSE in Canada totalled \$34 billion, equivalent to about three-quarters of expenditures on elementary and secondary education (\$48 billion).¹³⁸

Table 3.2: Combined public and private expenditure on education, by level of education, Canada, 1997–1998 to 2004–2005 (2001 constant dollars).

	Pre-elementary, Elementary, Secondary	Trade-vocational	College	University	All Post- Secondary	All Levels Combined
(Millions of 2001 Constant Dollars)						
1997–1998	40,209	6,168	5,066	13,214	24,448	64,657
1998–1999	41,545	6,909	5,099	13,778	25,786	67,332
1999–2000	41,501	5,587	5,757	15,316	26,660	68,160
2000–2001	41,304	5,808	5,667	16,580	28,055	69,359
2001–2002	42,295	5,632	5,824	17,466	28,921	71,216
2002–2003	43,696	5,366	5,720	19,231	30,317	74,013
2003–2004	45,722 ^e	5,395	5,801	21,232	32,428	78,150 ^e
2004–2005	48,235 ^e	5,485	5,914	22,598	33,998	82,233 ^e
Percentage Change 1997–1998 to 2004–2005	20	-11.1	16.7	71.0	39.0	27.2

Notes:

^a These data include Canada's spending on education in foreign countries (e.g., Department of National Defence schools) and undistributed expenditure.

^b Expenditures on private business colleges are not included.

^c Large year-to-year variations in public and private funding to school boards result from accounting adjustments to prior-year surpluses and deficits. Therefore, trends should be observed over a period of years, instead of from one year to the next.

^e Estimate

Sources: Canadian Education Statistics Council, *Education Indicators in Canada: Report of the Pan-Canadian Education Indicators Program 2007*, Table B.1.1 (Ottawa: Statistics Canada, December 2007), Catalogue no. 81-582-XIE. Data updated Dec. 16, 2009. Estimate Revised.

According to the OECD, the proportion of private expenditures (which includes tuition fees) in Canada's colleges and universities was 47% in 2005; an increase from 39% in 2000, while Canada's 53% share of public expenditures was well below the OECD average of 73% and the EU average of 81%.^{*139}

The OECD's *Education at a Glance (2009)* indicates that in the 2006–2007 academic year the average tuition for a public PSE institution in Canada was equivalent to US\$3,705.[†] During the same year, Canada's tuition costs were the fifth highest of the 20 OECD countries reporting on tuition fees.¹⁴⁰

According to Statistics Canada, undergraduate tuition fees increased 3.6% for the 2009–2010 academic year, matching the increase from the previous academic year. On average, undergraduate students paid \$4,917 in tuition fees in 2009–2010, compared with \$4,747 in 2008–2009.¹⁴¹

At the national level, graduate students faced larger increases to tuition fees than undergraduate students. In 2009–2010, graduate students paid an average of \$6,008 in tuition fees, an increase of 4.7% from 2008–2009 when tuition fees were on average \$5,737.¹⁴²

Federal, provincial and territorial governments have loan programs to assist students with tuition fees and other education-related costs. In 2006–2007, nearly 350,000 full-time students received close to \$2 billion of financial aid from the Canada Student Loans Program.¹⁴³

Monitoring student debt load is important to understanding issues of persistence in PSE and in being able to assess the appropriate balance between public investments in PSE and tuition fees. The 2007 National Graduates Survey indicated that nearly half of all graduates in 2005, who did not pursue further education[‡], had incurred a student debt.

* The share of public expenditures for the OECD average and EU average are for the year 2006.

† For international comparisons, the OECD converts tuition fees to U.S. dollars.

‡ All analysis on student loans and debt from Statistics Canada's 2007 National Graduate Survey were limited to graduates that did not pursue further education within the two years after graduation.

Of the 194,600 graduates in 2005, 49% had financed their post-secondary education with some form of education-related loan. The proportion of graduates owing money varied across the educational levels, from 44% of doctoral graduates to 54% of bachelor's graduates.¹⁴⁴

The average graduate debt load (from government and non-government sources) varied substantially across the PSE graduates from \$13,600 for college graduates to \$25,600 for doctoral graduates. College graduates, who typically had shorter program durations, had the lowest average overall debt-level, followed by bachelor degree graduates, master's degree graduates and graduates with doctoral degrees.¹⁴⁵

Average debt loads exceeded \$20,000 for graduates with student debt at the bachelor's, master's and doctoral levels. Nearly one-quarter (24%) of university graduates had paid off their debt two years after graduating. Within this group, master's graduates were the most likely (32%) to have paid their student related debt (government and non-government), followed by doctoral graduates (30%), graduates with bachelor's degrees (28%). Nearly one-quarter (24%) of college graduates had paid off their total student debt within two years.¹⁴⁶

Innovation, Knowledge Creation and Knowledge Transfer

Innovation, knowledge creation and knowledge transfer are closely tied to Canada's ability to be productive, to participate effectively in global markets and to address industry and social challenges.

Research and development (R&D) is increasingly important in modern economies and societies as it underpins competitiveness and productivity, and fuels economic growth. R&D also helps deepen the knowledge and understanding needed to protect public interests and advance responsive public policies in times of rapidly changing social, economic and environmental challenges.

R&D at Canadian community colleges, institutes and polytechnics help Canada's business sector remain innovative, productive and internationally competitive. However, the R&D sector is multi-faceted and its funding arrangements are complex.

Funding of R&D in the higher education sector* (PSE) was \$4.8 billion in 2007, an increase of 150% from 1996.¹⁴⁷ The PSE sector accounted for more than a third (36%) of

Table 3.3: Class of 2005 graduates who owed money for their education to any source, by level of study.

	College	University		
		Bachelor's	Master's	Doctorate
Percentage of graduates who owed student debt to any source	45%	54%	46%	44%
Average debt owed to all sources at time of graduation	\$13,600	\$22,800	\$22,800	\$25,600
Percentage of graduates with debt who had paid it off two years after graduation	24%	28%	32%	30%
Average debt remaining two years after graduation for those who still owed	\$11,800	\$20,400	\$19,500	\$22,500

Note: Graduates who pursued further education after their 2005 graduation are excluded from this table. Averages and numbers are rounded to the nearest 100, but analysis is carried out on unrounded values. Data Source: Statistics Canada, National Graduates Survey (Class of 2005).

Source: Justin Bayard and Edith Greenlee, *Graduating in Canada: Profile, Labour Market Outcomes and Student Debt of the Class of 2005* (Ottawa: Statistics Canada, April 2009), Catalogue 81-595-M, no. 74.

* In this section on R&D, higher education and PSE refers to colleges and universities only (trades information is not included).

expenditures on research and development (R&D) activity in 2007, an increase from 27% in 1996.¹⁴⁸

At 48%, the business sector provides the highest level of funding for R&D within Canada. But this proportion is still below the OECD average of 63% for business.

Expenditures related to R&D activities performed in the PSE sector are more than double the OECD average (36% vs. 17%) and surpass the EU average of 22%.

Qualified R&D personnel are critical to developing Canada's potential for innovation and knowledge creation. Data on the number of personnel working in the R&D sector helps us understand changes in the number of patent submissions and changes in the area of commercializing new knowledge.

In 2006, there were 226,250 full-time personnel engaged in research and development activities in Canada; a 55% increase since 1997.¹⁴⁹

The business enterprise sector is the largest employer of R&D personnel in Canada—this sector employed 66% of R&D personnel in 2006.¹⁵⁰ From 2005 to 2006, 90% of the increase in R&D hires came from this sector. The second-largest employer of R&D personnel is the PSE sector, which accounted for 25% of total R&D personnel in 2006; the federal government followed in third place, representing 7% of total R&D personnel.¹⁵¹

The majority of R&D workers continue to be researchers. In 2006, researchers accounted for nearly two-thirds (62%) of the R&D sector's total personnel. Technicians accounted for 25% and 13% were support staff.¹⁵²

In 2006, the PSE sector employed 31% of researchers, 12% of technicians and 24% of other support staff.¹⁵³ Doctoral students formed 71% of total researchers in the PSE sector in 2006. Of these doctoral students, 52% focused on natural science and engineering work, while the remaining 48% worked within the social sciences and humanities sector.¹⁵⁴

Post-secondary institutions (PSIs) provide the forum where these personnel are educated. University graduate degrees are critical to producing the advanced knowledge and research skills needed for innovation.

Between 2002 and 2007, the number of bachelor degrees awarded in Canada increased by nearly one-third (31%), enlarging the potential pool of graduate students and researchers.

The number of master's degrees awarded during the same five-year period increased by 32%, from 26,307 in 2002 to 34,791 in 2007.¹⁵⁵

The number of doctorate degrees awarded increased by about 29%, from 3,729 in 2002 to 4,827 in 2007.¹⁵⁶

Between 2002 and 2007, there was a 27% increase in the number of master's degrees awarded in physical and life sciences, technologies and mathematics, and computer and information sciences—all key areas of R&D. The number of doctoral degrees in these fields of study increased by 29%.¹⁵⁷

Active, Healthy Citizenry

Individuals, communities and society as a whole benefit from having a populace that is well educated. There is increasing evidence that education, including PSE, can significantly impact individual well-being, and community and civic engagement.

Although factors such as income and gender also play major roles, individuals with higher levels of educational attainment tend to enjoy higher levels of life satisfaction and also more active in the communities that they live in.

According to Statistics Canada's Community Health Survey, in 2005 more than two-thirds (67%) of Canadians with a post-secondary qualification considered themselves to be in "very good" or "excellent" health; compared with 43% of those without a high-school diploma.¹⁵⁸

The OECD's 1999–2004 World Values Surveys provide a compilation of data on life satisfaction by level of educational attainment (classified as low, middle and high attainment).¹⁵⁹ On measures of life satisfaction in 26 OECD countries, there was an average gap of 10 percentage points between individuals with low levels of educational attainment and those with high levels of attainment. In Canada, the gap was five percentage points.¹⁶⁰

In 2003, Canadians with a high-school diploma or lower were one-half and one-quarter as likely to vote as those with at least some post-secondary education.¹⁶¹

A Skilled and Adaptable Workforce

Research indicates that there is a direct connection between a skilled and adaptable workforce and improved productivity, innovation, competitiveness, economic stability, employability and employment rates. Canadian rates of educational attainment are among the

highest in the world. The percentage of the population aged 25 to 64 years with post-secondary credentials has risen consistently over the past two decades. While the overall distribution of Canada's population with PSE is positive, troubling trends have developed at a finer level. Over the last 15 years, there has been increased convergence in the type of PSE that students select and in the fields of study completed.

According to the 2006 Census, six out of 10 Canadians aged 25 to 64 had completed some form of PSE.¹⁶² Younger Canadians are increasingly choosing universities over other PSE options. In 2006, 29% of those aged 25 to 34 had a university education compared with 18% of those aged 55 to 64.¹⁶³

In 2006, 23% of those aged 25 to 34 had graduated from a college or CEGEP, compared with 16% of those aged 55 to 64.

Conversely, 13% of those aged 55 to 64 had a trade certificate in 2006 compared to 10% of those aged 25 to 34.¹⁶⁴

Canada has also increased its dependence on immigrants to supplement the labour-market pool of post-secondary graduates. In 2006, more than 1 in 5 (22%) of university graduates in Canada were immigrants with foreign credentials.¹⁶⁵

The 2006 Census indicates that 7% of the trades' population and 8% of the college-educated population were not born in Canada and did not earn their certificates or diplomas in Canada.¹⁶⁶

Quality Assurance in PSE

Quality post-secondary education is a measure of the sector's efficiency in producing knowledgeable and qualified graduates. It includes the ability to attract and retain students, the quality of teachers and programs, and level of employer satisfaction with graduate skills and knowledge.

The National Survey of Student Engagement (NSSE) is an annual survey that asks post-secondary students across the United States and Canada about their learning experiences. Topics covered include frequency and duration of homework, frequency of contact with faculty or other advisors and number of books read for courses and for pleasure. The NSSE has been in use for the past decade in several hundred American institutions and in a growing number of Canadian universities.

Canada's results show that full-time enrolment at Canadian universities increased at three times the rate of faculty increases (56% versus 19%) between 1987 and 2006.¹⁶⁷

The *Pan-Canadian Study of First Year College Students* surveyed students at more than 90 Canadian colleges, at the beginning and end of their first year. The objective was to collect student perceptions of the quality of their first-year experience and profile the college student population in general.

In 2005, more than three-quarters (78%) of college student survey respondents believed that all faculty members demonstrated an interest in helping students, 73% reported that faculty were available to meet outside of class, and more than 70% reported that their relationships with faculty were positive.¹⁶⁸

The survey also found that 76% of Canadian college students felt that their institution provided the necessary services and resources to support learning, and 60% stated that their school had specific programs to help students adjust to the college environment.¹⁶⁹

The National Apprenticeship Survey (NAS) provided some results pertaining to the quality of training received in Canada's apprenticeship programs. More than 80% of all apprentices were supervised by a journeyperson at all times throughout their workplace training and reported that their supervisor took the time required to explain their training and tasks clearly. As a result, more than 80% of apprentices in each category reported that their workplace training was not too difficult.¹⁷⁰

POST-SECONDARY EDUCATION: RECENT CCL REPORTS

State of E-Learning in Canada (2009)

This report affirms that e-learning holds much promise to improve Canada's economic competitiveness and prepare Canadians for the demands of the 21st century. As e-learning is provided in a variety of settings—including in schools, the workplace and the community—it can play a key role in formal

and informal learning. In particular, there is some evidence to suggest that the provision of and registration in e-learning is gaining momentum within Canadian post-secondary institutions. The report notes, however, that several issues are constraining Canada's ability to take full advantage of e-learning's potential.

Available at:
www.ccl-cca.ca/CCL/reports/StateELearning

Post-Secondary Education in Canada: Meeting our Needs? (2009)

CCL's third annual report on PSE set out to determine whether Canadians have the right skills and knowledge to adapt to a fast-changing economy and how well Canadian PSE responds to their requirements. This report reveals numerous imbalances that compromise Canada's capacity to excel in the 21st century. The research-driven report provides context, global comparisons and a vision of what PSE could be.

Available at: www.ccl-cca.ca/PSE

Survey of Canadian Attitudes toward Learning (SCAL)

This annual report provides a unique opportunity to gauge the opinions, perceptions and beliefs of Canadians about various aspects of learning in Canada. The 2008 Survey of Canadian Attitudes toward Learning: Results for Learning throughout the Lifespan examined the perceived quality, accessibility and affordability of colleges, CEGEPs and universities as well as the prevalence of post-secondary student mobility and experiences with credit transfer Canada-wide.

Available at: www.ccl-cca.ca/SCAL

Lessons in Learning

- "Post-secondary education in Canada: who is missing out?" (April 2009)
- "Gappers: taking time off between high school and post-secondary studies" (June 2008)
- "Aboriginal and rural under-representation in Canada's medical schools" (April 2008)

Available at: www.ccl-cca.ca/LessonsInLearning

CCL commissioned reports include

Where Did They Go?: Post-Secondary Experiences, Attitudes & Intentions of 2005/06 BC High School Graduates Who Did Not Pursue Public Post-Secondary Education in British Columbia by Fall 2007 (April 2009)

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CHAPTER 4:

ADULT LEARNING

The Organisation for Economic Co-operation and Development (OECD) defines adult learning as all forms of education or training taken by adults (those aged 25 and over) for professional or personal reasons.¹⁷¹ As demonstrated in this chapter, adult learning can take many forms, including returning to formal education, as well as informal and non-formal learning activities, such as taking courses for work or pleasure, volunteering, participating in community activities or pursuing interests and hobbies.

Learning plays a critical role in enabling Canadian adults to maintain the skills and knowledge needed to make informed decisions and lead successful lives. Research has shown that individuals with higher levels of education tend to lead longer and healthier lives, are more engaged in their community, and express greater personal satisfaction with their lives.¹⁷²

KEY INDICATORS OF ADULT LEARNING

Adult Literacy

- Prose literacy

Health Literacy

Learning for Work

- School-to-work transition
- Job-related education or training
- Employer-sponsored training
- Non-formal, work-related learning
- E-learning

Learning at Home

- Exposure to media
- Internet use

Learning in the Community

- Donating
- Volunteering
- Civic participation
 - Participation in organized groups and organizations
 - Voter participation
- Sense of belonging and trust
- Socializing with other cultures

Adult Literacy

Literacy is an essential part of modern society, and is linked to all aspects of life. Its reach is extensive and complex, influencing how fully and effectively a person is able to engage in both the workplace and in the community.

Literacy encompasses a spectrum of skills ranging from basic literacy—knowing how to read and write—to multiple literacies, which describe the ability to decode, identify, communicate and evaluate information in many forms, delivered through various media. Adult literacy is most often associated with prose literacy.

Prose literacy

Prose literacy is defined as the knowledge and skills needed to understand and use information from text such as news stories, editorials, poems and fiction. Level of proficiency is typically measured on a scale of 1 to 5. Level 3 is considered the minimum threshold required to cope with the demands of everyday life and work in an increasingly knowledge-based economy. This level roughly denotes the skill level required for successful high-school completion and college entry.¹⁷³

According to the 2003 International Adult Literacy and Life Skills Survey (IALSS) nearly half (48%) of adults in Canada have prose-literacy levels below Level 3.¹⁷⁴

In 2009, CCL introduced an interactive, online tool that maps prose literacy rates in more than 52,000 cities and towns across Canada (available at www.ccl-cca.ca/literacy). Combining data from the 2003 IALSS and the 2006 Census, the prose literacy map conveys the pervasiveness of low prose-literacy among adults throughout every region of the country.

Health Literacy

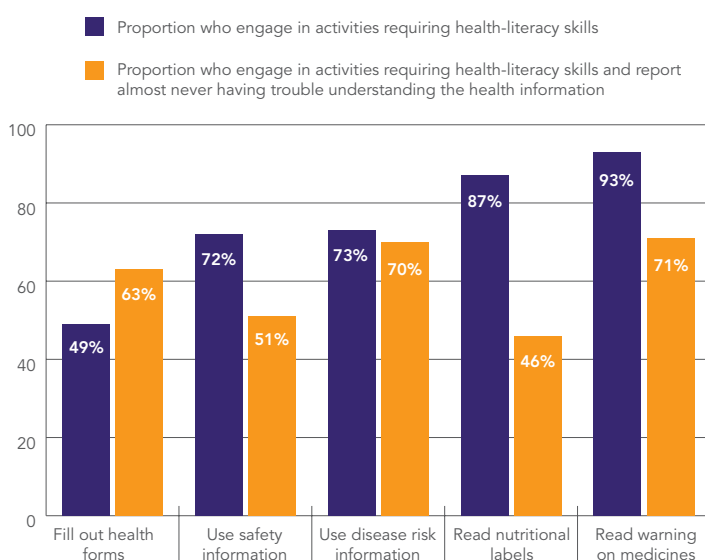
Health literacy is a composite of skills, dependent on, but different from, general literacy. This set of skills enables individuals to perform health-related tasks, such as reading nutrition labels, following medication directions, or understanding safety instructions. To master health literacy, adults usually need, simultaneously, all three literacy skills: prose literacy, document literacy and numeracy.¹⁷⁵

It is estimated that 60% of Canadians (ages 16 and older) have a low level of health literacy.¹⁷⁶ According to the 2008 *Survey of Canadian Attitudes toward Learning* (SCAL), Canadians are most confident in their ability to read directions and warnings on new medicines, but are least confident in their ability to read nutritional labels.¹⁷⁷

The SCAL sheds light on other issues of health literacy, including the types of resources adults use to learn about their health, and how level of education can influence choice of health-related information. On average, Canadians aged 18 to 74 consult six different

sources of health-related information. A majority of these adults consult family doctors (73%) and other health professionals (69%), family and friends (69%), and newspapers and magazines (64%). Nearly two-thirds (62%) of Canadians look for health-related information on the internet, and over 50% turn to books and television.¹⁷⁸

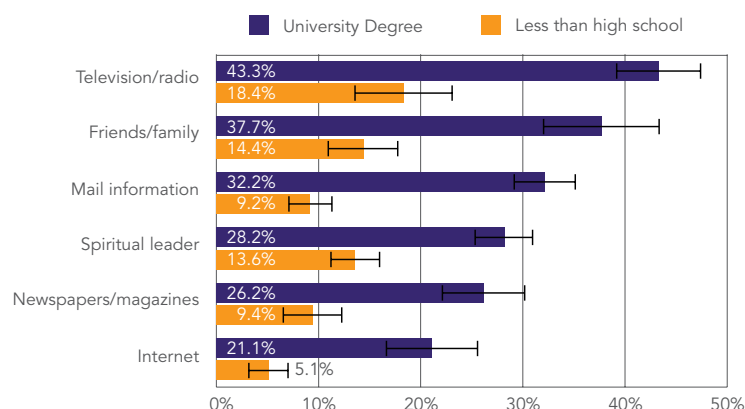
Figure 4.1: Proportion of Canadians who engage in activities requiring health-literacy skills and proportion of those who frequently understand health information, 2008.



Source: Canadian Council on Learning, 2008 Survey of Canadian Attitudes toward Learning (SCAL): Results for Learning throughout the Lifespan (Ottawa: 2009).

Yet the SCAL also shows that Canadians with more education are more sceptical about the reliability of certain sources of health information: Of adults with a university degree, 43% reported that they did not use health-related information provided by the media (such as television and radio) because of concerns about reliability. In contrast, only 18% of Canadians without a high-school diploma reported concerns about the reliability of those sources.¹⁷⁹

Figure 4.2: Proportion of Canadians who do not use sources of information due to concerns about reliability, by education level, 2008.



Source: Canadian Council on Learning, 2008 Survey of Canadian Attitudes toward Learning (SCAL): Results for Learning throughout the Lifespan (Ottawa: 2009).

LITERACY MATTERS

"Literacy is the basic pre-requisite for escaping from poverty and dependency. Through literacy, individuals can become self-reliant and gain the resilience they need to be able to cope with the setbacks and the opportunities that come their way. As they become self-reliant, they become effective citizens—paying their taxes, voting in

elections, volunteering in their communities—and effective workers. They also gain the capacity to be able to support their children to achieve higher literacy skills."

Source: Judith Maxwell and Tatyana Teplova, *Canada's Hidden Deficit: The Social Cost of Low Literacy Skills* (London, ON: Canadian Language and Literacy Research Network, 2007).

Learning for Work

Through work-related learning activities, adults can improve their skills and knowledge in the course of their working lives. Learning for work can involve the acquisition, upgrading and updating of job-specific skills, as well as the strengthening of soft skills, such as communication, critical thinking and problem-solving abilities. The learning can be formal, non-formal, or informal (including self-directed) and may be union or employer-sponsored. It can take place at the workplace under normal operational conditions, or off-site.

School-to-work transition

The transition from school to work is a critical period where positive initial experiences can have a long-term impact on future labour-market attachment and can strongly influence attitudes toward future participation in learning activities at home, in the community and in the workplace. The routes taken by students are shaped not only by educational systems and students' own experiences, but also by parents, governments and employers.¹⁸⁰ However, the transition process, which is comprised of both the time spent in school (high school and post-secondary) and the time it takes to settle into a job, is not clear cut. It is often characterized by youth moving in and out of the labour market, either in temporary or part-time jobs, in educational programs or in a combination of both. As a result, assessing the efficacy of school-to-work transitions in Canada is complex.

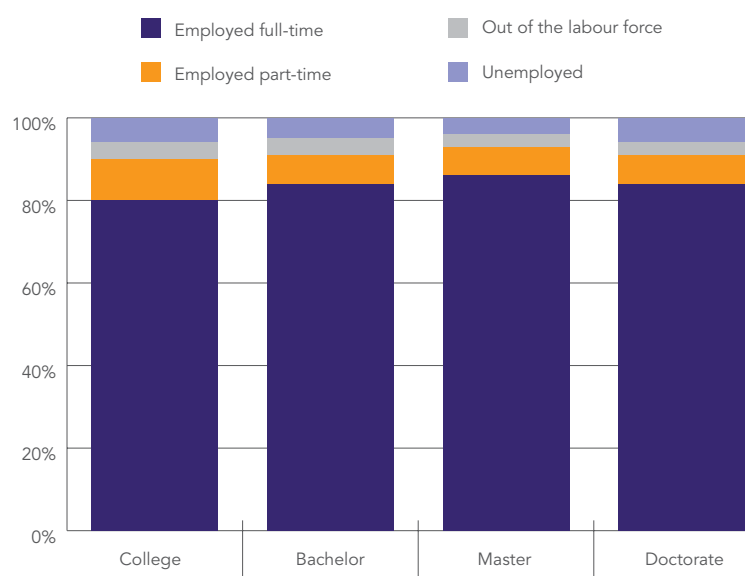
According to the 2007 National Graduate Survey, a lower proportion of 2005 graduates (64%) entered the workforce after graduation compared to graduates from 2000 (67%). The lower rate occurred despite favourable labour-market conditions.¹⁸¹ A slightly lower proportion of college graduates were working full-time compared to graduates at other levels. The proportion of graduates who worked part-time was similar among those with a bachelor's, master's or doctoral degree.¹⁸²

Among graduates who did not take further education, employment rates two years after graduation were high across all levels of study, ranging from 90% for college graduates to 93% for master's graduates.¹⁸³

Differences in earnings were also observed among college, bachelor, master's and doctoral level graduates.¹⁸⁴

The largest earnings premium existed between the bachelor's and master's levels, suggesting that investing in further post-graduate work is financially beneficial. On the other hand, the difference in earnings premium between a master's level and a doctorate level suggests that for doctorate students, the monetary gain from employment two years after graduation is marginal.¹⁸⁵

Figure 4.3: Proportion of 2005 graduates working full-time and part-time, unemployed, and out of the labour force, by level of education, 2007.



Source: Justin Bayard and Edith Greenlee, *Graduating in Canada: Profile, Labour Market Outcomes and Student Debt of the Class of 2005* (Ottawa: Statistics Canada, April 2009), Catalogue 81-595-M, no. 74.

Job-related education and training

Research has shown that job-related education and training can contribute to the success of Canadian employers and employees. Recent evidence shows that employers can benefit from job-related education and training through increased labour productivity, while employees stand to gain through improved job performance, higher wages and improved career opportunities.

According to Statistics Canada's Access and Support to Education and Training Survey (ASETS)*, 36% of working-

* Statistics Canada's ASETS is a new survey that replaces three previously conducted surveys addressing issues relating to antecedents and determinants to access to post-secondary education, including the role of student financing and participation in adult education and training. It replaces the Survey of Approaches to Educational Planning (SAEP), the Post-secondary Education Participation Survey (PEPS) and the Adult Education and Training Survey (AETS).

age adults (aged 25 to 64 years) participated in job-related education or training* in 2008, an increase from 30% in 2002. For the most part, this overall increase is attributable to the increased participation in job-related training—from 25% in 2002 to 31%. Participation in job-related education over the same period remained unchanged at 8%.¹⁸⁶

Participation in job-related education or training was highest among individuals aged 25 to 34. However, between 2002 and 2008, the largest increase in participation rates occurred among middle-aged individuals, followed by older Canadians. In 2008, the participation rate of adults aged 35 to 44 was 42% compared to 32% in 2002. Adults aged 45 to 64 participated at a rate of 29% compared to 24% in 2002, and those aged 25 to 34 had a participation rate of 43% compared to 40% in 2002.¹⁸⁷

Consistent with previous research, ASETS affirms the link between educational attainment and participation in further learning activities. However, while those with post-secondary education had higher participation rates, gains were made in the participation rate of individuals without a high school diploma—from 8% in 2002 to 14% in 2008.¹⁸⁸

In 2008, Canadians who participated in job-related training spent, on average, 50 hours in their training activities. ASETS revealed that participation rates in job-related training were lowest for those without a high-school diploma and for individuals not employed during the reference period, but that the level of intensity (average number of hours) was highest for both of these groups.¹⁸⁹

Employer-sponsored education and training

Employers support employee education or training activities in various ways. Their support can include: providing the training, paying for the associated costs (either directly or by reimbursing the employee), creating a flexible work schedule, or providing transportation to and from the training site.

Results from ASETS show that in 2008, the majority (91%) of job-related training activities undertaken by employed

adult Canadians aged 25 to 64 were employer-supported, a slight increase from the rate of 88% in 2002.¹⁹⁰ However, only half (50%) of employed Canadians aged 25 to 64 who participated in education programs in 2008 received support from their employer, a slight decrease from the rate of 52% in 2002.¹⁹¹

While older Canadians were less likely to participate in job-related education programs, they were more likely to have their employer's support: more than half of employed adults aged 35 to 44 and 45 to 64 who participated in work-related education received employer support (56% and 55% respectively), compared to employed youth aged 18 to 24 (30%).¹⁹² Further, the increased proportion of employer-supported job-related training activities between 2002 and 2008 was more pronounced among Canadians aged 35 to 44 (an increase from 89% to 92%) and 45 to 64 (from 89% to 91%) compared to those aged 25 to 34 (from 87% to 88%).¹⁹³

The proportion of participant in education programs that received employer support increased with level of education—from 28% of participants without high school to 46% among participants with post-secondary education.¹⁹⁴ Similarly, the proportion of training participants who received employer support was highest among individuals with a high-school diploma (95%) and showed the largest increase since 2002 (up from 89%), compared to individuals without a high-school diploma (an increase from 91% to 92%) and those with a post-secondary education (an increase from 88% to 90%).¹⁹⁵

According to a 2009 Conference Board of Canada report, companies in Canada spent an average of \$787 per employee on training, learning and development in 2008. In real dollar terms, this level of expenditure represents a 40% decline over the past decade and a half.¹⁹⁶

Non-formal, work-related learning

Non-formal, work-related learning involves activities such as direct instructional mentoring, coaching or observation by a superior. It can entail learning that occurs through job rotation; e-learning activities such as online courses, tutorials or seminars; or self-guided learning such as reading, researching, using manuals,

* According to ASETS, *education* entails formal modes of learning and is defined as structured learning activities that lead to a credential, i.e., programs that combine multiple courses toward the completion of a diploma, degree, certificate or license. In contrast, *training* entails non-formal modes of learning and is defined as structured learning that does not lead to a formal credential; it includes courses that are not part of a program, workshops or seminars.

asking a colleague for help, or problem-solving on one's own. Non-formal learning supports formal learning but does not lead to certification.¹⁹⁷

The 2008 SCAL showed that, overall, 88% of non-retired Canadians engaged in some type of non-formal,[†] work-related training during the four weeks prior to the survey. Independent forms of learning such as problem-solving, reading books or researching online were the most popular forms of non-formal learning. The less popular forms were more structured, such as on-the-job training, e-learning and job rotations.¹⁹⁸

E-learning

Most simply defined, e-learning is the application of computer technologies to a variety of educational or workplace learning contexts and approaches. It can include blended learning approaches (i.e., using learning technologies combined with face-to-face learning), formal learning accomplished primarily through courses offered online, or self-directed informal learning. Through e-learning, individuals have the flexibility to learn at their own pace, anywhere, at any stage in the lifespan.

E-learning can provide employees with a wide range of skills—from technical to administrative and management skills. In particular, e-learning is appropriate for literacy and essential skills training.

Many workplace organizations have adopted a blended approach—a combination of online and in-class instruction.¹⁹⁹ Virtual classrooms, which provide for live instruction without the travel, are also growing in popularity.²⁰⁰

Learning at Home

For many Canadians, learning at home occurs quite naturally on a day-to-day basis through involvement in a range of self-directed activities, some of which are purposeful rather than incidental. Learning at home can have benefits, such as reinforcing knowledge and skills acquired in initial education and providing opportunities to explore new content areas without having to enrol in a course or fulfil formal educational prerequisites. The most obvious learning activities that occur in the home are those related to exposure to mass media and use of the internet.

Exposure to media

Through exposure to different types of media (from print publications to multi-media websites), adults can access a wide range of information, thus broadening their opportunities to learn.

Statistics Canada data show that the number of households reporting expenditures on print materials (such as newspapers, magazines and books) steadily declined between 2002 and 2007, from 86% to 75%.²⁰¹ By 2007, 15% fewer Canadian households were buying magazines than was the case in 2002, while 23% fewer were buying newspapers and 40% fewer were buying printed maps. However, the proportion of households that reported spending on books remained constant at 49%.²⁰²

Internet use

Canadian adults use the internet for a variety of purposes, including exchanging e-mail, making travel arrangements, and finding updates on the news, weather and sports highlights.

Almost three-quarters (73%), or 19.2 million Canadians aged 16 and older, used the internet for personal reasons in 2007, an increase from just over two-thirds (68%) in 2005.²⁰³

While the prevalence of information and communication technologies (ICTs) has the potential to widen the opportunity gap between low- and higher-income individuals, ICTs can serve as a tool for adults to connect with resources within their community and open up greater opportunities for informal learning. Although internet use in Canada has become more common, research indicates that a 'digital divide' still exists. Important factors such as the user's age, area of residence, level of and education and age.

Fewer residents living in small towns or rural areas went online (65%) in 2007 compared to urban residents (76%), although both proportions were higher than in 2005.²⁰⁴

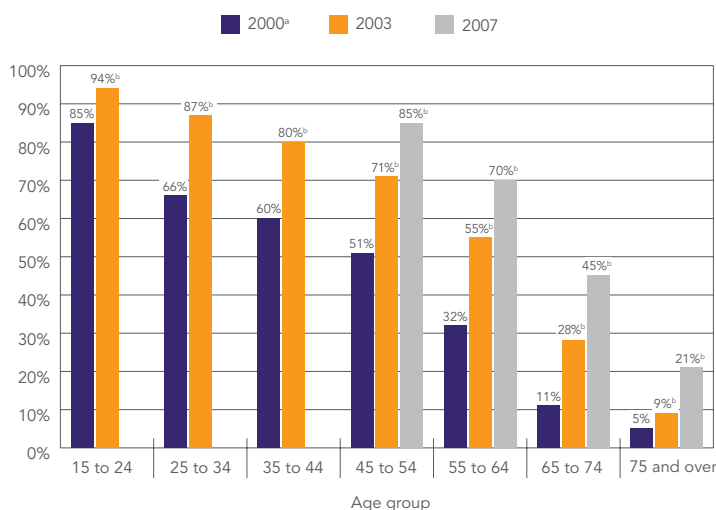
Internet use is associated higher levels of education. In 2007 more individuals with at least some post-secondary education used the internet than those who had less education (84% versus 58%).²⁰⁵

Also in 2007, the vast majority (96%) of Canadians aged 16 to 24 went online, more than three times the rate for

† SCAL 2008 uses the term *non-formal* to refer to both non-formal and informal learning. However, the OECD makes a distinction between these two types of learning. The OECD defines *non-formal learning* as any organized and sustained educational activity; this type of learning can take place both within and outside educational institutions.

seniors aged 65 and older (29%). Growth rates of internet use in 2007 were highest among seniors aged 65 and older, at nearly four times the rate in 2000.^{*206}

Figure 4.4: Rates of internet use, by age group and selected years (2000, 2003, and 2007).



^a reference group

^b statistically significant difference from reference group at $p < 0.05$

Note: includes individuals using the internet in the 12 months preceding the survey. Excludes "Don't know" and "Not stated".

Data source: Statistics Canada, General Social Survey, 2000, 2003, 2007.

Source: Ben Veenhof and Peter Timusk, "Online activities of Canadian boomers and seniors," Canadian Social Trends, no. 88 (August 2009): 25–32. Statistics Canada Catalogue no. 11-008-XWE.

Learning in the Community

Adults engage in a range of learning opportunities in the community, building social networks through activities such as donating, volunteering, and participation in organizations and clubs. These activities can help build social capital—the bonds of trust and mutual support which research has shown can contribute to learning.

Donating

Many Canadians show concern for those in need by making charitable donations. These donations help charitable or non-profit organizations to provide numerous services and goods that are vital to the well-being of Canadians.²⁰⁷

The 2007 Canada Survey of Giving, Volunteering and Participating (CSGVP) indicated that almost 23 million Canadians—84% of the population aged 15 and over—made a financial donation to a charitable or other non-profit organization in the 12-month period covered by the survey.²⁰⁸

Similarly, 85% of Canadians aged 15 and older made an in-kind contribution, donating clothing, toys or household goods (79%), and food (60%).²⁰⁹

The donation rate in 2007 was virtually unchanged from 2004 (85%), although the number of donors increased by nearly 3%, in part due to an almost 4% increase in the size of the population aged 15 and older.²¹⁰

Canadians donated almost \$10 billion in 2007, an increase of 12% or \$1.1 billion since 2004.²¹¹ Canadians with higher levels of formal education are more likely to give financial donations and tend to give higher donations. In 2007, 91% of adults with a university degree donated an average of \$711, while 72% of adults with less than a high-school diploma donated, on average, \$215.²¹² The largest increase in donations in 2007 came from adults with some post-secondary education; average donations from this group rose from \$316 in 2004 to \$387 in 2007.²¹³

Volunteering

Volunteering fosters the sharing of information and knowledge among members of the same network or community, and can help to strengthen social connections. Research suggests there is a link between volunteerism and learning, that individuals who are more active in community organizations, as volunteers or as non-volunteers, are more likely to participate in adult learning.²¹⁴

Results from the 2007 CSGVP demonstrate that almost 12.5 million Canadians, or 46% of the population aged 15 and older, volunteered during the one-year period preceding the survey.^{**} The rate of volunteering was largely unchanged from the 45% reported in 2004. However, the number of volunteers rose by 6%, partially because the population aged 15 and older had increased in size.²¹⁵

Canadians contributed close to 2.1 billion volunteer hours in 2007 (the equivalent of more than one million full-time jobs), a 4% increase in hours since 2004.²¹⁶

* Conversely, internet-use rates for Canadians aged 15 to 24 had reached a point of near-saturation by 2003 (94%), leaving little room to sustain high growth-rates.

** The CSGVP defines volunteering as doing activities without pay on behalf of a group or an organization, and includes mandatory community service.

Individuals with higher levels of formal education were more likely to volunteer and to contribute more volunteer hours than less educated individuals. Adults with less than a high-school education were least likely to volunteer (39%) and volunteered the fewest hours (136), while those with a university degree were most likely to volunteer (57%) and volunteered the most hours (187).²¹⁷

In general, Canadians were more likely to volunteer for certain types of organizations: sports and recreation, social services, education and research, and religious.²¹⁸

Figure 4.5: Canadian volunteer rate by selected type of organization, 2007.



Source: Statistics Canada, *Caring Canadians, Involved Canadians: Highlights from the 2007 Canada Survey of Giving, Volunteering and Participating* (Ottawa: June 2009), Catalogue no. 71-542-XIE.

Civic participation

Participation in organized groups and organizations

Through participation in organized groups or organizations, adults have the opportunity to interact with others, widen their social networks and become more engaged as community members. According to the 2008 General Social Survey, 65% of Canadians aged 15 and older participated in or belonged to at least one organized group, organization or association.²¹⁹

Individuals were more likely to participate in organizations involving sports and recreation (29%); union or professional activity (29%); the school or community (21%); and culture, education and hobbies (20%).²²⁰

Voter participation

The extent to which citizens vote in an election is an indication of their interest in, and concern for, their

society's economic, social and political well-being. According to Elections Canada, the total number of voters in the 2008 federal election (including advance polls, special ballots and ordinary polling day) was 13,929,093, or 59% of registered electors.²²¹

However, as Elections Canada notes, it is important to consider that the self-reported turnout was higher than the actual turnout (73 versus about 59 percent). This was also the case for the 2006 general election (87 versus about 65 percent).*

Consistent with Elections Canada data, the 2008 General Social Survey, indicated that 73% of Canadians aged 18 and older reported voting in the last federal election; 72% voted in the last provincial election; and 59% voted in the last municipal election.²²²

However, one in four (21%) Canadians aged 18 and older did not vote in either the last federal or provincial election.²²³

The proportion of Canadians who voted in the last federal and provincial election varied with age. While 87% of Canadians aged 55 and older reported voting in the last federal election, only 44% of those aged 18 to 24 reported voting federally. Similarly, 88% of Canadians aged 55 and older reported voting in the last provincial election compared to 43% of Canadians aged 18 to 24. Close to half (46%) of those aged 18 to 24 did not vote in either federal or provincial elections compared to those aged 55 and older (9%).²²⁴

Sense of belonging, confidence and trust

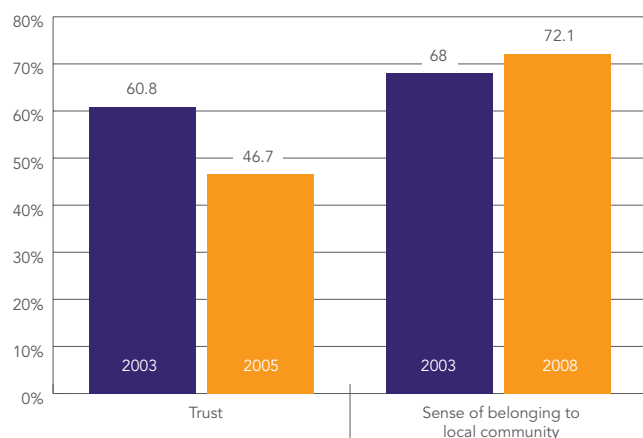
An individual's sense of belonging to their community, and their level of trust and confidence in its members, can foster an environment conducive to exploring new experiences, relationships and learning. Research suggests that Canadians have a relatively strong sense of belonging to their community but a lower level of trust and confidence in others.

The proportion of Canadians who reported having a "very strong" or "somewhat strong" sense of belonging to their local community increased from 68% in 2003 to 72% in 2008.^{225, 226} Feelings of community belonging were more prevalent among older adults: In 2007, 79% of Canadians aged 55 and older reported having a "somewhat strong" or "very strong" sense of belonging to their community compared to 64% of Canadians aged 15 to 24 and 71% of those aged 25 to 54.²²⁷

* Despite these limitations, surveys remain the best method for understanding the factors that may contribute to electors' decision to vote—or not.

However, the proportion of Canadians who reported feeling that their neighbours could be trusted decreased to 47% in 2005 from 61% in 2003.^{228, 229}

Figure 4.6: Canadians' trust and sense of belonging to community or neighbourhood, 2003, 2005 and 2008.



Source: Statistics Canada, 2003 General Social Survey, Cycle 17; 2005 General Social Survey, Cycle 19; and 2008 General Social Survey, Cycle 22.

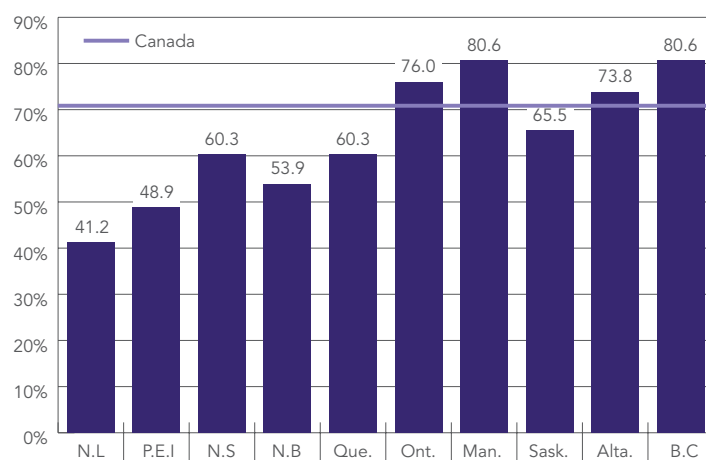
Socializing with other cultures

By socializing and interacting across cultures, Canadians gain greater understanding and respect for different perspectives, ideas and approaches to life. Canadians appear to recognize the value of socializing with other cultures.

Results from the 2008 SCAL indicate that 91% of Canadians believe that interaction with diverse cultures is important.²³⁰

Furthermore, 94% of Canadians agreed that cross-cultural interaction helps foster learning.²³¹ A large proportion (71%) reported that they made a point of socializing with people from other cultures in 2008. Data show that residents of Manitoba, Ontario, Alberta and British Columbia are most likely to do so, which may be partially due to the fact that these four provinces have the highest proportions of immigrant populations.²³²

Figure 4.7: Proportion of Canadian adults who socialized with people from other cultures on a regular basis, by province, 2008.



Source: Canadian Council on Learning, 2008 Survey of Canadian Attitudes toward Learning (Ottawa: 2009).

ADULT LEARNING: RECENT CCL REPORTS (2008–2009)

Securing Prosperity through Canada's Human Infrastructure (2009)

CCL's second report on the state of adult learning and workplace training in Canada suggests that investments in human infrastructure—i.e., building Canada's talent—in times of economic uncertainty and of relative prosperity, are critical to securing a strong economy and greater social equity.

Available at: www.ccl-cca.ca/adultworkplace2009

Interactive Prose Literacy Map

CCL has launched an online mapping tool that allows users to explore profiles of prose literacy in 52,200 cities, towns and communities across the country. The map uses data from the 2003 International Adult Literacy and Life Skills Survey (IALSS) which was conducted by Statistics Canada and the Organisation for Economic Co-operation and Development (OECD), and combines it with 2006 Census data. As part of its commitment to providing information that Canadians can use, CCL's free Prose Literacy Map provides an extraordinary look at adult literacy data in Canada.

Available at: www.ccl-cca.ca/literacy

State of E-Learning in Canada (2009)

This CCL report affirms that e-learning holds much promise for improving Canada's economic competitiveness and preparing Canadians for the demands of the 21st century. As e-learning is provided in a variety of settings—including in schools, the workplace and the community—it can play a key role in formal and informal learning. The report notes, however, the constraints to Canada's ability to exploit e-learning's full potential.

Available at: www.ccl-cca.ca/CCL/Reports/StateELearning

Survey of Canadian Attitudes toward Learning (SCAL): Results for Learning throughout the Lifespan

CCL's annual SCAL provides a unique opportunity to gauge the opinions, perceptions and beliefs of Canadians about various aspects of learning in Canada. The 2008 SCAL examines Canadian attitudes toward adult work-related learning and health-related learning.

Available at: www.ccl-cca.ca/SCAL

Lessons in Learning

- More education, less employment: immigrants and the labour market" (October 2008)
- "Improving literacy levels among Aboriginal Canadians" (September 2008)
- "How low literacy can affect your health" (March 2008)
- "The benefits of experiential learning" (February 2008)

Available at: www.ccl-cca.ca/LessonsInLearning

CCL commissioned reports include:

- Workplace Learning in Small and Medium-sized Enterprises: Effective Practices for Improving Productivity and Competitiveness (September 2009)
- Thinking about Knowledge Mobilization (January 2009)
- Achieving our Potential: An Action Plan for Prior Learning Assessment and Recognition (PLAR) in Canada (October 2008)
- Survey of French-Language Research on Adult Learning in Canada: 1997–2007 (September 2008)

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CHAPTER 5:

ABORIGINAL LEARNING

Aboriginal people in Canada have long understood the role that learning plays in building healthy, thriving communities. Despite significant cultural and historical differences, Canada's First Nations, Inuit and Métis people share a vision of learning as a holistic, lifelong process.

Increasingly, governments, Aboriginal organizations and communities are making decisions and developing policies that reflect a better understanding and awareness of an Aboriginal perspective on learning. However, the effectiveness of these decisions still typically rely on conventional measurement approaches that offer a limited—and indeed incomplete—view of the state of Aboriginal learning in Canada.

Current measurement approaches typically focus on the discrepancies in educational attainment between Aboriginal and non-Aboriginal youth (in particular, high-school completion rates) and often overlook the many aspects of learning that are integral to an Aboriginal perspective on learning. Consequently, current measurement approaches rarely reflect the specific needs and aspirations of Aboriginal people.

Until now, a comprehensive framework for measuring Aboriginal learning has not been available in Canada, or indeed most of the world. CCL's new report, *The State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success* (2009) represents the first application of such a framework—The Holistic Lifelong Learning Measurement Framework—and marks an innovative approach to measuring Aboriginal learning in Canada.

This chapter presents key highlights from *The State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success*, which is available online at www.ccl-cca.ca.

THE HOLISTIC LIFELONG LEARNING MEASUREMENT FRAMEWORK

The Holistic Lifelong Learning Measurement Framework uses a different set of indicators than previously employed in CCL's *State of Learning* reports. The new framework defines the domains that are needed for comprehensive measurement of First Nations, Inuit and Métis learning in Canada. It includes existing indicators and data that highlight new information from new data sources.

The new framework reflects the underlying structures of the First Nations, Inuit and Métis Holistic Lifelong Learning Models that were first published in 2007 by CCL.²³³ These learning models were developed by Aboriginal learning experts across Canada, marking an essential first step toward the development of the present framework. It incorporates the elements common to all three learning models, while acknowledging and integrating elements that are unique to the learning perspectives of First Nations, Inuit and Métis people. As such, it constitutes a shared tool for monitoring progress in Aboriginal communities for future years.

The three main components of the Holistic Lifelong Learning Measurement Framework are: Sources and Domains of Knowledge, *The Lifelong Learning Journey* and *Community Well-Being*. Each component of the framework includes a set of indicators that contribute to a more complete assessment of Aboriginal learning. Taken together, these indicators illustrate the full range of learning opportunities that occur across the life cycle (from infancy through to the senior years) and in a variety of settings (school, home, community, workplace and the land). The Community Well-Being indicators reinforce the relevance of social and economic conditions that contribute to (or impede) learning success. These indicators are a necessary component when analyzing and interpreting learning outcomes for Aboriginal people.

KEY INDICATORS OF ABORIGINAL LEARNING

Presented below are key indicators derived from the Holistic Lifelong Learning Measurement Framework, for which data are currently available. Organized to reflect two of the three structural components (*Sources and Domains of Knowledge* and *Lifelong Learning Journey*), they represent only a fraction of those contained in the Framework. New data and information will be added to the Framework as they become available.

SOURCES AND DOMAINS OF KNOWLEDGE:

Exposure to Elders

- Time spent with Elders

Use of Traditional Skills

Participation in Cultural Ceremonies

LIFELONG LEARNING JOURNEY:

Youth

Learning in School

- High-school dropout rate

Learning at Home and in the Community

- Participation in extra-curricular activities
 - Clubs or groups
 - Sports
 - Art or music

Young Adults

Post-secondary Education

- University attainment
- College diploma attainment
- Trade certificate attainment

Learning at Home and in the Community

- Distance education

SOURCES AND DOMAINS OF KNOWLEDGE

The Holistic Lifelong Learning Measurement Framework identifies the sources and domains of knowledge that contribute to Aboriginal learning: people (family, Elders, community), languages, traditions and ceremonies, spirituality, and the natural world. Western and Aboriginal knowledge and learning approaches co-exist within this component. This section of the *State of Learning* report highlights two of these sources and domains—exposure to Elders and use of traditional skills.

Exposure to Elders

Aboriginal learning is a highly social process that serves to nurture relationships in the family and throughout the community. These social relationships are a cornerstone for learning about ancestral language, culture and history.

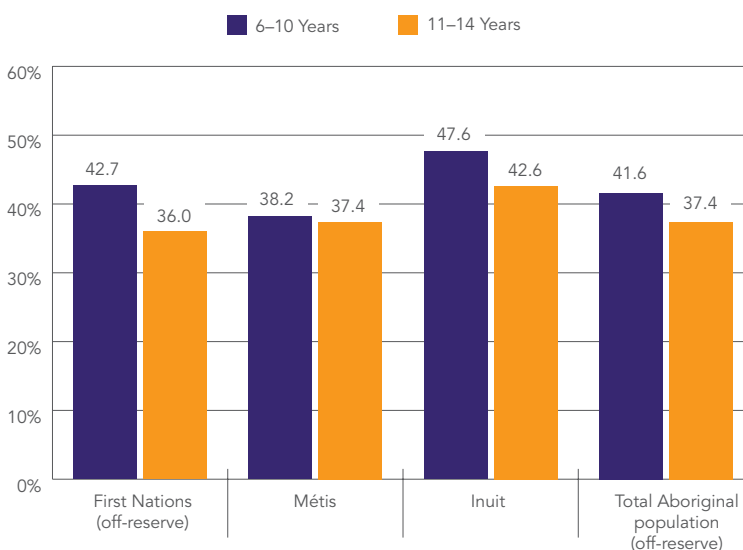
Elders play a key role as facilitators of lifelong learning in Aboriginal communities. They teach about responsibilities and relationships among family and community—which serves to reinforce intergenerational connections and identities²³⁴—and transmit the community's culture through the sharing of parables, allegories, lessons and poetry. Elders are instrumental in fostering culturally-affirming school environments that link students, staff, families and community to Aboriginal cultures and traditions.²³⁵

Time spent with Elders

According to Statistics Canada's Aboriginal Peoples Survey (APS), in 2006 approximately four in 10 off-reserve Aboriginal youth reported that they spent time with Elders outside of school and at least once a week. Within this group, youth aged six to 10 years old (42%) were more likely than their older peers aged 11 to 14 (37%) to spend time with Elders.

Inuit reported the highest exposure to Elders (45%), followed by 40% of off-reserve First Nations children and 38% of Métis youth, though further research indicates that this latter finding may be a result of a lack of opportunity. A 2006 survey of Métis living in British Columbia found that 93% of Métis people would like Elders and youth to spend more time together.²³⁶

Figure 5.1: Proportion of off-reserve Aboriginal youth who spent time with Elders after school, at least once a week, by age, 2006.



Source: Statistics Canada, 2006 Aboriginal Peoples Survey. Special tabulation, unpublished data received by CCL in 2009 through special request.

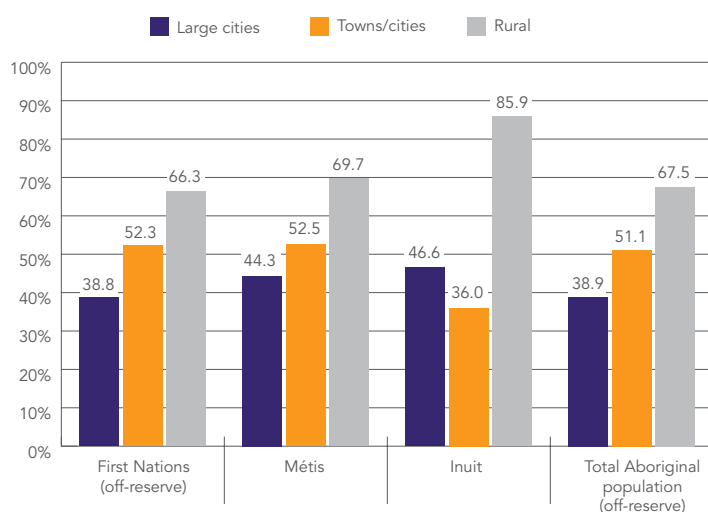
Use of Traditional Skills

Learning from the land is an essential aspect of First Nations, Inuit and Métis learning, and entails a significant amount of experiential learning—a purposeful mode of learning that is most often associated with activities that occur outside the classroom, and is often referred to as *learning by doing*. The Inuit concept of *Isumaqsayuq*,

for example, refers to learning that takes place through observation and imitation of family and community activities such as traditional food preparation or hunting.²³⁷

As Statistics Canada's APS showed, in 2006 half of all Aboriginal youth and adults living off reserve had taken part in hunting, fishing, trapping or camping in 2006 (a slight increase from 49% in 2001). The proportions were much higher for Aboriginal youth and adults living in rural areas (68%), particularly Inuit living in northern communities (86%), compared to those living in smaller towns (51%) and large cities (39%). First Nations, Métis and Inuit males were more likely (57%) to participate in the learning of such traditional skills than their female counterparts (45%).

Figure 5.2: Proportion of Aboriginal youth and adults aged 15 and over who took part in hunting, fishing, trapping or camping, at least once a year, by area of residence, 2006.



Source: Statistics Canada, 2006 Aboriginal Peoples Survey. Special tabulation, unpublished data received in 2009 by CCL through special request.

Participation in Cultural Ceremonies

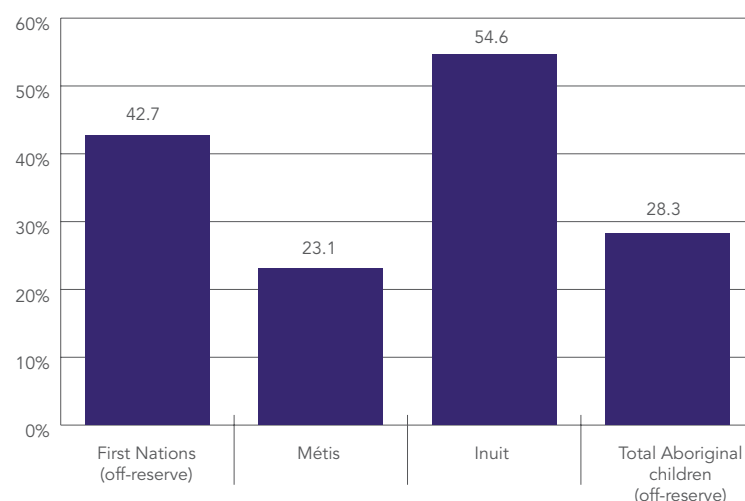
Aboriginal participation in cultural events varies according to the availability of opportunities within a given community. For example, many young First Nations children living off reserve often grow up in culturally diverse communities where Aboriginal people represent a small minority of the population. In such instances their ability to maintain ties to First Nations culture is more challenging than for those living on reserve communities populated entirely by First Nations people.

According to Statistics Canada's Aboriginal Children's Survey (ACS), in 2006 18% of Aboriginal parents living off reserve indicated that their community provided "very good" or "excellent" cultural activities for their children.

Among Aboriginal groups, Inuit parents reported the highest levels of satisfaction with almost one in three (31%) saying they were satisfied with the cultural activities in their community.²³⁸

Despite reports of limited cultural opportunities, in 2006 28% of all off-reserve Aboriginal children aged five and under participated in or attended a culturally-related activity such as singing, drum dancing, fiddling, gatherings or ceremonies in the preceding year. Inuit and First Nations children living off reserve reported the highest rates of participation at 55% and 43% respectively, while Métis children had the lowest at 23%.²³⁹ For Aboriginal children living in rural communities, 32% participated in a culturally-related activity, compared to 32% of children living in small towns and 25% living in cities.²⁴⁰

Figure 5.3: Proportion of Aboriginal children aged five and under who participated in or attended traditional Aboriginal cultural activities in the past year,* 2006.



Note:

* Includes those who reported taking part in this activity "more than once a day," "once a day," "more than once a week," "at least once per month," "at least once per year," and "less than once per year."

Source: Statistics Canada, Aboriginal Children's Survey 2006. Special tabulation, unpublished data received by CCL in 2009 through special request.

LIFELONG LEARNING JOURNEY

The *Lifelong Learning Journey* component of the Holistic Lifelong Learning Measurement Framework contains the key learning inputs and outputs that are part of the lifelong learning process. It reflects the vast array of learning opportunities that occur formally and informally, in a range of settings, and throughout each stage of life: infant and child, youth, young adult, adult and elder.

This section presents highlights of Aboriginal learning that occurs during two stages of the life cycle: youth and young adulthood.

Youth

Learning in School

From age six to 18, children and youth build upon the skills and knowledge they need to become successful adult learners. This stage of life is particularly important when it comes to Aboriginal learning, given the large—and growing—population of young Aboriginal people. According to the 2006 Census, there are more than 1.1 million people in Canada who identify themselves as an Aboriginal person—approximately 40% of whom are under 20 years old.²⁴¹

First Nations, Inuit and Métis students attend various types of schools that vary from region to region. For example, the majority of Aboriginal students who live off reserve attend schools that fall under provincial or territorial jurisdiction, ranging from larger schools in urban centres like Toronto to small, remote schools found in northern communities like Taloyoak, Nunavut. The situation is different for First Nations people who live on reserves. Research shows that in 2006, 62% of on-reserve First Nations students were enrolled in one of the 507 schools operated by First Nations communities and regulated by Indian and Northern Affairs Canada.²⁴²

Given the wide range of educational contexts across the country, existing indicators of academic success must be approached with a degree of caution, and the urge to over-simplify resisted. For example, Aboriginal learning indicators among Aboriginal youth can vary tremendously among Aboriginal groups, across geographic regions and between communities, rendering any attempts at generalization ineffective at best.

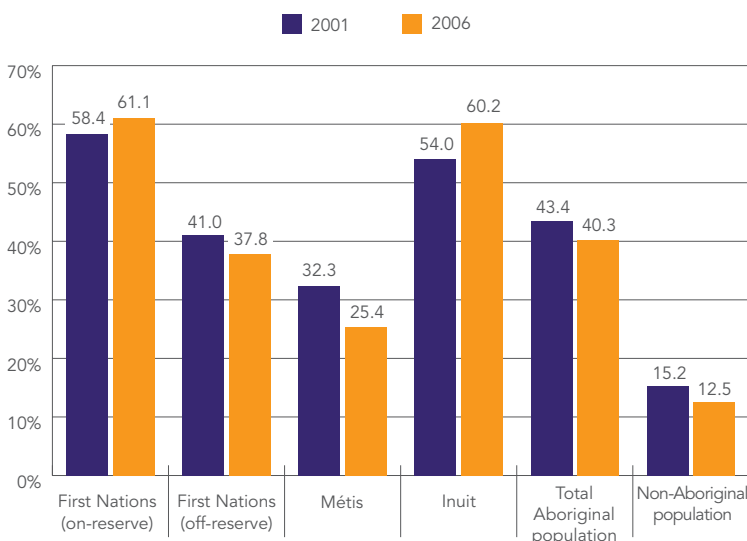
High-school dropout rate

According to the 2006 Census, 40% of Aboriginal young adults aged 20 to 24 had not completed high school, compared with a rate of 13% for non-Aboriginal young adults.

This proportion has decreased among certain groups of Aboriginal young people, such as First Nations living off-reserve (from 41% in 2001 to 38% in 2006) and Métis (from 32% to 25%). However, a slight increase has occurred over the same five-year period among First Nations young people living on-reserve—from 58% to 61%—and Inuit, from 54% to 60%.

High-school incompleteness rates vary widely from community to community across Canada and must be accounted for when analyzing these outcomes. For example, incompleteness rates for First Nations living on-reserve range from a low of 38% in Prince Edward Island, to 47% in British Columbia, and to a high of 72% in Manitoba. For Inuit communities, high-school incompleteness rates range from a low of 34% for those living in urban centres to a high of 71% in Nunavut.²⁴³

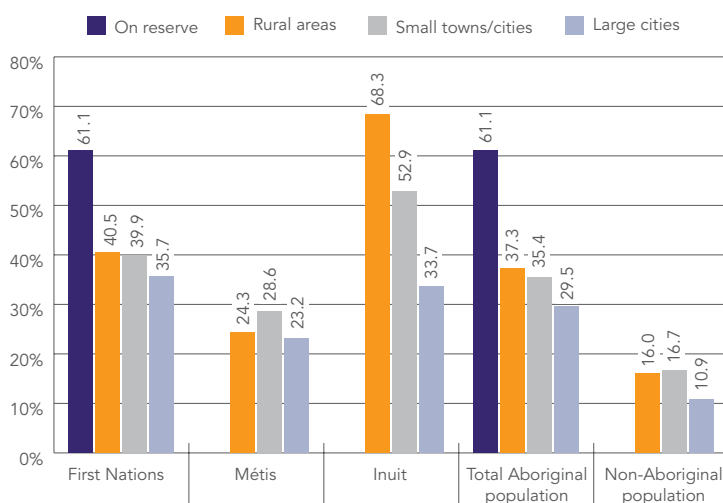
Figure 5.4: Proportion of Aboriginal and non-Aboriginal young adults aged 20 to 24 with no high-school diploma, 2001 and 2006.



Source: Statistics Canada, "Labour Force Activity (8), Aboriginal Identity (8), Highest Certificate, Diploma or Degree (14), Area of Residence (6), Age Groups (12A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces and Territories, 2006 Census – 20% Sample Data," Topic-based tabulation, 2006 Census of Population (Ottawa: March 4, 2008), Catalogue no. 97-560-X2006031.

Further, the high-school incompleteness rates for Aboriginal and non-Aboriginal young adults living in large cities are lower (30% and 11%, respectively) than that of their counterparts living in rural areas (37% and 16%, respectively) or smaller towns and cities (35% and 17%, respectively).²⁴⁴ The contrast is especially striking with Inuit communities. In 2006, 68% of Inuit young adults living in rural settlements in the North had not completed high school, a rate twice that of Inuit residing in large cities (34%).

Figure 5.5: Proportion of Aboriginal people aged 20 to 24 with no high-school diploma, by area of residence, 2006.



Source: Statistics Canada, "Labour Force Activity (8), Aboriginal Identity (8), Highest Certificate, Diploma or Degree (14), Area of Residence (6), Age Groups (12A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces and Territories, 2006 Census – 20% Sample Data," Topic-based tabulation, 2006 Census of Population (Ottawa: March 4, 2008), Catalogue no. 97-560-X2006031.

Learning at Home and in the Community

Informal learning opportunities that occur outside of school can complement the formal learning of Aboriginal youth. Taking place either in the home or in the community, these extra-curricular activities include participation in clubs and community groups, cultural and recreational activities (such as sports, music, dance) and volunteer work.

Research shows that participation in recreational and cultural activities is linked to increased expectations for young people about their future education. According to the National Longitudinal Survey of Children and Youth (NLSCY), young people in Canada who participate more frequently in recreational and cultural activities tend to

complete college or university programs more often than those who participate less often or who never participate.²⁴⁵

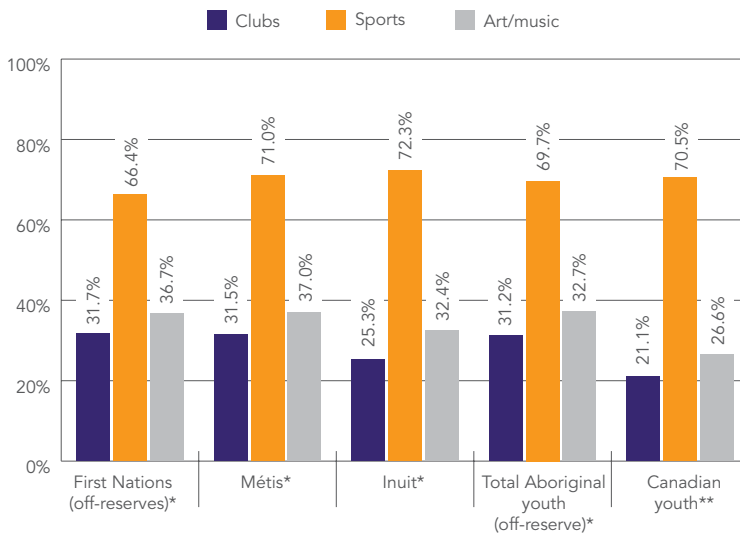
Participation in extra-curricular activities

Clubs or groups

According to Statistics Canada's APS, in 2006 almost one-third (31%) of off-reserve Aboriginal youth (aged six to 14) participated in after-school clubs or groups at least once-a-week, a rate greater than that of Canadian youth of similar age (21%).

Among Aboriginal youth, off-reserve First Nations and Métis youth had the highest participation rates (32%), followed by Inuit youth (25%). Aboriginal girls were much more likely to participate in after-school clubs or groups at 38% than Aboriginal boys (25%)—regardless of identity.²⁴⁶

Figure 5.6: Proportion of off-reserve Aboriginal and Canadian youth aged 6 to 14 who participated in extracurricular activities after school, at least once a week, 2006.



Sources:

* Statistics Canada, 2006 Aboriginal Peoples Survey. Special tabulation, unpublished data received by CCL in 2009 through special request.

** National Longitudinal Survey of Children and Youth, Cycle 7, 2006–2007. Special tabulation, unpublished data received by CCL in 2009 through special request. Measures youth aged 6 to 9 and 12 to 15.

Sports

According to Statistics Canada's APS, in 2006 70% of Aboriginal youth living off-reserve reported that they had participated in a sports activity after school at least once a week, similar to a finding among Canadian youth (71%)

from a comparable survey. However, the participation rate among Aboriginal youth has decreased significantly since 2001, when it was 81%, a common trend that is witnessed for youth across the country.²⁴⁷

Among Aboriginal youth, Inuit had the highest rates of participation in sports (72%) followed by Métis (71%) and off-reserve First Nations youth (66%). The participation rates of Inuit youth living in Inuit Nunangut were similarly high at 71%, but Inuit youth living in large cities and smaller towns were more likely to participate in sports and recreation programs (81% and 79%, respectively).²⁴⁸

Art or music

In 2006, 37% of off-reserve Aboriginal youth participated in art and music groups (or lessons) after school at least once a week, compared with 38% in 2001. Aboriginal youth are more likely than Canadian youth (27%) of a similar age to participate in art or music according to a comparable survey.²⁴⁹

Métis youth (37%) and off-reserve First Nations youth (37%) were the most likely to participate, followed by Inuit youth (32%). Aboriginal girls (43%) were more likely to participate in after-school art or music groups than Aboriginal boys (32%), regardless of identity.²⁵⁰

Young Adults

The young-adult period is typically the time when individuals gain greater independence from their family and make pivotal decisions that can impact the rest of their adult lives, such as the pursuit of further education, participation in the labour market and personal lifestyle choices.

This transition is not necessarily a straightforward one. Some Aboriginal learners enter the labour market immediately, while others directly enroll in post-secondary education (PSE). Still others dip in and out of work, study and travel—or combine the pursuit of post-secondary education (PSE) with work experience and skills development.

In 2006 the median age of the Aboriginal population in Canada was 27, compared to a median age of 40 for the non-Aboriginal population.²⁵¹

Post-secondary Education

In 2006 an estimated 41% of Aboriginal people aged 25 to 64 had completed a post-secondary certificate, diploma or

degree. Although this rate was significantly below that of the non-Aboriginal population (56%), Aboriginal people were on an equal footing with their non-Aboriginal counterparts at both the college and trade levels of attainment.²⁵²

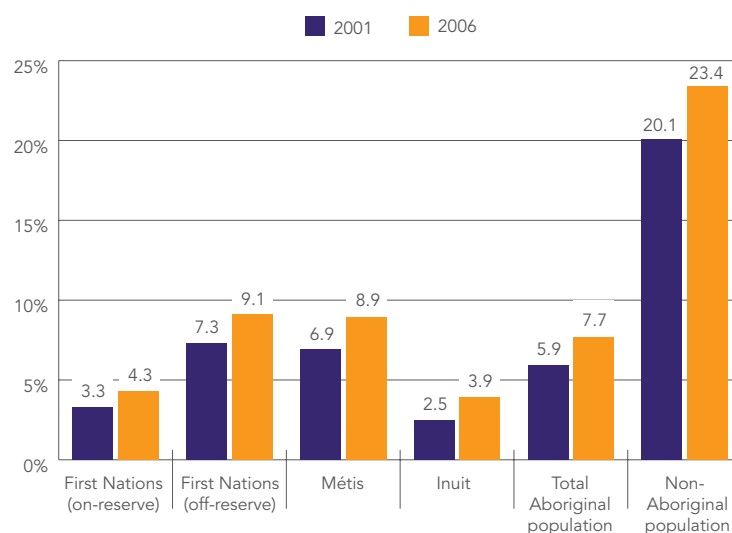
University attainment

Because of changes to Census questions, comparisons of PSE attainment rates between 2001 and 2006 are only possible at the university level. From 2001 to 2006, university attainment among Aboriginal people increased from 6% to 8%, but still remained well behind university attainment rates for non-Aboriginal people (23%).

In essence, the gap in overall post-secondary education between Aboriginal and non-Aboriginal people is directly related to the wide gap in university attainment.

First Nations people living on-reserve (4%) and Inuit (4%) had the lowest university attainment rates, while First Nations living off-reserve (9%) and Métis (9%) had the highest. Aboriginal people living in large cities (12%) had higher university attainment rates than Aboriginal people living in smaller towns (7%) and rural communities (6%).²⁵³

Figure 5.7: Proportion of Aboriginal and non-Aboriginal people aged 25 to 64 who have completed a university program, 2001 and 2006.



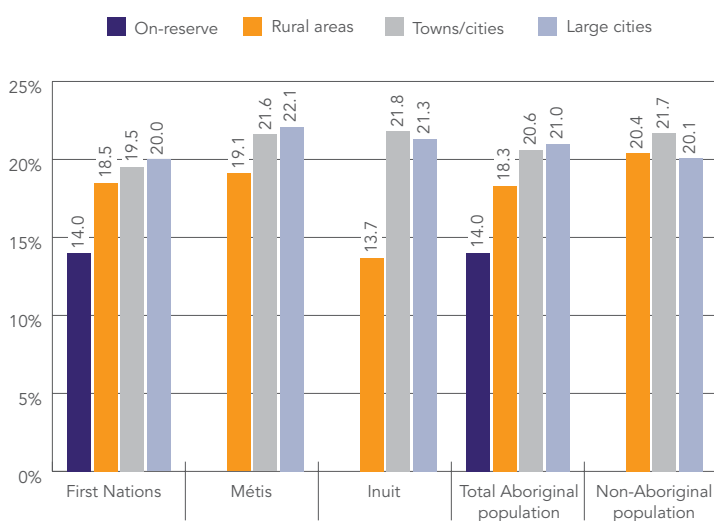
Source: Statistics Canada, "Labour Force Activity (8), Aboriginal Identity (8), Highest Certificate, Diploma or Degree (14), Area of Residence (6), Age Groups (12A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces and Territories, 2006 Census – 20% Sample Data," Topic-based tabulation, 2006 Census of Population (Ottawa: March 4, 2008), Catalogue no. 97-560-X2006031.

College diploma attainment

Research shows that the majority of Aboriginal people who participate in PSE attend either a college or trade school, rather than a university. In 2006, the proportion of Aboriginal adults who had completed a college diploma was on par with non-Aboriginal adults (19% and 20%, respectively). Métis (21%) and off-reserve First Nations (20%) had the highest rates of college attainment, while First Nations living on-reserve (14%) and Inuit (17%) had the lowest attainment rates.²⁵⁴

Aboriginal people living in large cities (21%) and smaller towns and cities (21%) were more likely to have completed a college diploma than those living in rural communities (18%), regardless of identity. First Nations people living on-reserve (14%) and Inuit living in northern rural communities (14%) had the lowest rates of college completion.

Figure 5.8: Proportion of Aboriginal and non-Aboriginal people aged 25 to 64 who have completed a college diploma or certificate, by area of residence, 2006.



Source: Statistics Canada, "Labour Force Activity (8), Aboriginal Identity (8), Highest Certificate, Diploma or Degree (14), Area of Residence (6), Age Groups (12A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces and Territories, 2006 Census – 20% Sample Data," Topic-based tabulation, 2006 Census of Population (Ottawa: March 4, 2008), Catalogue no. 97-560-X2006031.

Furthermore, Aboriginal women were more likely (22%) to have completed a college credential than Aboriginal males (15%), regardless of identity—rates similar to that of non-Aboriginal women (23%) and men (18%).²⁵⁵

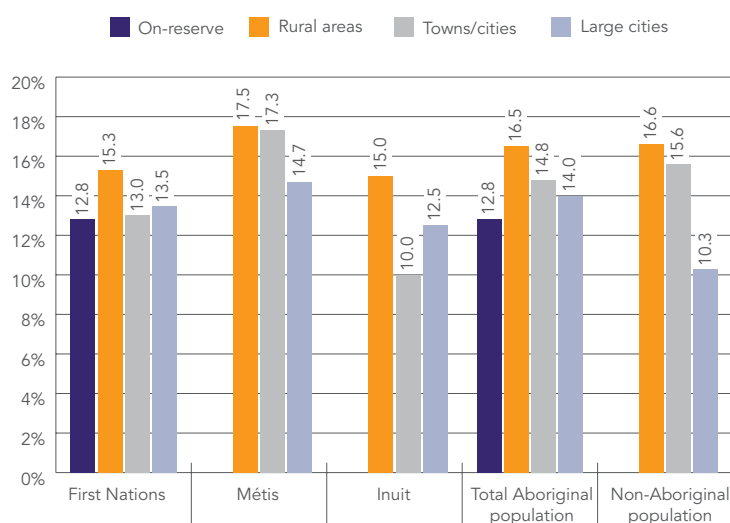
Trade certificate attainment

Skilled tradespeople play a vital role in maintaining Canada's competitive position in the global, knowledge-based economy. Labour-market demand for highly skilled and trained tradespeople continues to increase. The number of registrants in apprenticeship programs has grown considerably, a large proportion of them being Aboriginal.²⁵⁶

In 2006, a slightly higher proportion of Aboriginal adults (14%) completed a trade or apprenticeship certificate than non-Aboriginal adults (12%). The highest rates of attainment were among the Métis (16%), followed by First Nations living off-reserve (14%), First Nations living on-reserve (13%) and Inuit (13%).²⁵⁷

Aboriginal people living in rural communities were more likely (17%) to attain a trades certificate than those living in smaller towns and cities (15%) and larger cities (14%). This rural-urban tendency was especially true for Inuit living in northern rural communities (15%) and was similar for non-Aboriginal people (17%).

Figure 5.9: Proportion of Aboriginal and non-Aboriginal people aged 25 to 64 who have completed a trade or apprenticeship diploma or certificate, by area of residence, 2006.



Source: Statistics Canada, "Labour Force Activity (8), Aboriginal Identity (8), Highest Certificate, Diploma or Degree (14), Area of Residence (6), Age Groups (12A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces and Territories, 2006 Census – 20% Sample Data," Topic-based tabulation, 2006 Census of Population (Ottawa: March 4, 2008), Catalogue no. 97-560-X2006031.

Furthermore, Aboriginal males were more likely (19%) to have completed a trades or apprenticeship certificate than Aboriginal females (10%), regardless of identity. This finding was similar to the rates among non-Aboriginal men (16%) and women (9%).²⁵⁸

Although a lower proportion of Aboriginal adults—especially Inuit and First Nations living on-reserve—have attained a post-secondary degree, a 2005 EKOS survey of First Nations people living on-reserve found that 70% of young people aspire to pursue higher education.²⁵⁹ This indicates a clear gap between young Aboriginal people's PSE aspirations and their actual attainment rates.

Learning at Home and in the Community

Distance education

In a country as vast as Canada, geography can play a significant role in the ability for many young adults to participate in PSE. Indeed, smaller proportions of Aboriginal and non-Aboriginal people living in rural areas complete PSE than those in urban centres, especially at the university level.

Fortunately, distance education—or the use of information and communications technologies (ICTs) to support formal learning—is increasingly being looked to as a means of supporting people living in remote areas. Distance education provides learners with a virtual classroom in their homes and communities, enabling students to learn at their own pace and on their own time.²⁶⁰

According to Statistics Canada's APS, in 2006 18% of young off-reserve Aboriginal adults aged 20 to 34, and 18% of all off-reserve Aboriginal adults aged 15 to 64 took some form of post-secondary programming via distance education. For all Aboriginal adults, Métis (20%) and First Nations living off reserve (17%) were more likely to take distance education courses than Inuit (14%).²⁶¹

Aboriginal adults living in rural communities (20%) and smaller towns and cities (20%) were more likely to participate in distance learning than Aboriginal people living in cities (17%), where the majority of post-secondary institutions are located.

ABORIGINAL LEARNING: RECENT CCL REPORTS (2008–2009)

State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success (2009)

Until now, a comprehensive framework for measuring Aboriginal learning has not been available in Canada, or indeed most of the world. CCL's new report, *The State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success* (2009), represents the first application of such a framework—The Holistic Lifelong Learning Measurement Framework—and marks an innovative approach to measuring Aboriginal learning in Canada.

Available at: www.ccl-cca.ca/SAL2009

Lessons in Learning

- "Improving literacy levels among Aboriginal Canadians" (September 2008)
- "Students on the move: ways to address the impact of mobility among Aboriginal students" (May 2008)
- "Aboriginal and rural under-representation in Canada's medical schools" (April 2008)

Available at: www.ccl-cca.ca/LessonsInLearning

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