

STATE OF LEARNING IN CANADA  
No Time for Complacency



This publication is also available electronically on the Canadian Council on Learning's website at [www.ccl-cca.ca](http://www.ccl-cca.ca).

For additional copies of this publication, please contact:

Communications  
Canadian Council on Learning  
215–50 O'Connor Street, Ottawa ON K1P 6L2  
Tel.: 613.782.2959  
Fax: 613.782.2956  
E-mail: [info@ccl-cca.ca](mailto:info@ccl-cca.ca)

© 2007 Canadian Council on Learning

All rights reserved. This publication can be reproduced in whole or in part with the written permission of the Canadian Council on Learning. To gain this permission, please contact: [info@ccl-cca.ca](mailto:info@ccl-cca.ca). These materials are to be used solely for non-commercial purposes.

Cite this publication in the following format:  
Canadian Council on Learning. "State of Learning in Canada: No Time for Complacency," *Report on Learning in Canada 2007* (Ottawa: 2007). page(s).

Published in January 2007.  
Ottawa, Ontario

ISBN 978-0-9782220-2-4

Aussi disponible en français sous le titre *Rapport sur l'enseignement au Canada 2007, État de l'apprentissage au Canada : Pas le temps de s'illusionner.*

The Canadian Council on Learning is an independent, not-for-profit corporation funded through an agreement with Human Resources and Social Development Canada. Its mandate is to promote and support evidence-based decisions about learning throughout all stages of life, from early childhood through to the senior years.

## MESSAGE FROM THE CHAIR



**Robert Giroux**  
Chair of the Board

In this era of knowledge, success is not solely a measure of what we have learned in the past, but also of our capacity to acquire and apply new skills and knowledge throughout our lives.

But how do we define success?

Successful learning is often measured in economic terms, because schooling, qualifications and credentials typically translate into better jobs and greater opportunity. But there is more to success in today's complex world: it is also about our capacity to grow and flourish, to achieve our personal potential—at home, at work, or in our communities.

And that is why the Canadian Council on Learning is devoted to identifying successful approaches to learning for all Canadians, at every age and stage of life.

One way we fulfil our mandate is to explore the state of learning in Canada today, and to consider how it can be improved. For example, we recently published the first national review of Canada's performance in post-secondary education, which noted eight priorities for action to ensure that Canada's population has the skills and knowledge required to succeed.

We are equally proud of our Composite Learning Index, the world's first tool to measure a country's performance across the full spectrum of learning—in school, in the home, the workplace and the community. With an innovative scoring system mapped community by community, the CLI will be updated every year to monitor Canadians' progress in learning.

And now, we are releasing *State of Learning in Canada*, a comprehensive study of lifelong learning in Canada. The report covers the full spectrum of learning, from early childhood and the formal school years, to workplace and community-based learning. With annual updates and a special focus each year, CCL will also identify emerging patterns and trends in learning across the country.

The data and analyses we bring to you in the following pages tell a compelling story: a story about challenge and opportunity, aspiration and success.

A story that deserves to be told, because it is about Canada's future.

A handwritten signature in black ink, appearing to read 'Robert Giroux'.

Chair of the Board

# MESSAGE FROM THE PRESIDENT AND CEO



**Dr. Paul Cappon**  
President and CEO

*State of Learning in Canada*, the Canadian Council on Learning's overview of the country's learning landscape, weaves a story at once optimistic and alarming. The following pages illustrate that while Canadians have made strides toward a culture of lifelong learning, there is no room for complacency.

Prepared by CCL in collaboration with its five knowledge centres, this report provides an unprecedented image of the current state of learning in Canada from early childhood through to the senior years. It reveals where our strengths and weaknesses lie, and where more information is needed. *State of Learning in Canada* will be updated every year to reflect new data and knowledge.

But even from this initial snapshot, important insights have been brought into focus.

For example, we can confirm that our youngest citizens are generally healthy and well adjusted, ready and eager to enter Grade 1. In school, international testing shows that our students rank among the world's best in basic subjects. Our workforce has more university and college graduates than most other industrialized countries. And, well into their senior years, numerous Canadians continue to expand their personal horizons as active and engaged members of society.

On the other hand, the basic literacy skills of four in 10 adults in Canada are so low as to limit their economic prospects. Half cannot competently handle numbers and more than half cannot capably deal with information vital to their health and safety. The statistics are even more troubling for certain groups within the population, including seniors, immigrants and Aboriginal people.

A special feature on the state of literacy in Canada explores these findings in detail. In fact, the role literacy plays in the well-being of individual Canadians, the health of our economy and of our democratic society is highlighted throughout the document.

The landscape painted by the *State of Learning in Canada* is neither all green pastures nor barren wasteland. The report offers a clear-eyed portrait of where we stand today, the challenges we face and the opportunities we must make for ourselves in the future.

The Canadian Council on Learning's vision is to be a catalyst for lifelong learning across the country. I believe this report represents a call to action to strengthen learning throughout Canada.

A handwritten signature in dark ink that reads "Paul Cappon". The signature is written in a cursive, slightly slanted style.

President and CEO

# TABLE OF CONTENTS

CHAIR'S MESSAGE .....	i	CHAPTER 5 Aboriginal learning .....	65
PRESIDENT'S MESSAGE.....	ii	5.1 Introduction.....	65
TABLE OF CONTENTS .....	1	5.2 Indicators of Aboriginal Learning .....	68
SYNTHESIS: WHAT THIS REPORT TELLS US.....	2	Aboriginal languages and cultures .....	68
CHAPTER 1 Introduction .....	5	Early development and learning.....	72
CHAPTER 2 Early childhood learning .....	9	School-based learning.....	74
2.1 Introduction.....	9	Post-secondary education and skills training.....	75
2.2 Indicators of Early Childhood Development .....	10	Community-based education.....	78
Birth weight .....	10	5.3 The Road Ahead.....	80
Physical development and movement.....	11	CHAPTER 6 Learning and literacy: Canada's challenges .	83
Cognitive development.....	12	6.1 Introducing .....	83
Language and communication skills development .....	13	6.2 The meaning of literacy in Canada.....	85
Emotional and social development .....	16	6.3 The literacy facts of life .....	88
Early childhood education and care .....	17	6.4 The scope of Canada's literacy challenges .....	99
2.3 The Road Ahead.....	20	6.5 The importance of <i>Literacy for life</i> .....	105
CHAPTER 3 Learning in school .....	23	6.6 The literacy imperative .....	109
3.1 Introduction.....	23	6.7 Conclusion: No time for complacency .....	115
3.2 Indicators of Learning in School .....	24	CHAPTER 7 Summary and Future Directions .....	117
Student skills.....	24	7.1 Chapter summaries .....	117
Citizenship education .....	29	Early childhood learning.....	117
Healthy schools.....	32	Learning in school .....	118
High-school dropouts.....	37	Adult learning.....	119
Post-secondary education.....	38	Aboriginal learning.....	120
3.3 The Road Ahead.....	42	Literacy and learning: Canada's challenges .....	121
CHAPTER 4 Adult learning.....	45	7.2 Future Directions.....	122
4.1 Introduction.....	45	7.3 Measuring progress.....	123
4.2 Indicators of Adult Learning .....	46	ANNEX 1 Bibliography.....	124
Adult literacy .....	46		
Health literacy.....	50		
Work-related learning .....	53		
Learning for personal development, at home and in the community.....	59		
4.3 The Road Ahead.....	63		

# STATE OF LEARNING IN CANADA 2007

## Synthesis: What this report tells us

Call it Canada's learning paradox: while this country apparently is home to one of the world's most highly educated populations, more than four in 10 adults lack the reading and writing skills needed to thrive in a competitive global economy. Half, moreover, have serious trouble with numbers, and 55% may be jeopardizing their health because they are unable to understand prescription information, nutrition labels or safety instructions.

In other words, although there is much to admire and celebrate in Canada's learning landscape, there is little room for complacency.

The first *State of Learning in Canada* report delves into questions raised by the Composite Learning Index (CLI)—Canada's first-ever index for lifelong learning—released by the Canadian Council on Learning in May 2006. The index revealed that Canadian youth are well served by their formal schooling, but the country's learning advantage does not extend into adulthood.

On the positive side, the 2007 *State of Learning in Canada* report confirms that the vast majority of children in this country are born healthy, and grow up ready and able to learn. Most complete high school and an increasing number are attending post-secondary institutions. As they move through their working years, at least a third continues to upgrade and expand their skills and knowledge. A substantial proportion of adults also expand their horizons through volunteering or other forms of community engagement.

But the *State of Learning in Canada* also found some troubling trends. A growing number of schoolchildren arrive in class hungry, or are so inactive and overweight that their ability to learn may be at risk. There is bullying in our schoolyards. Students' knowledge of history and politics is waning, contributing to an ill-informed and disengaged citizenry. Adult literacy, in all its forms, remains at discouragingly low levels. And only a minor proportion of employers is investing in workplace learning.

Moreover, in a country with publicly funded education and learning opportunities for all, gaps persist between the wealthy and the poor, women and men, young people and old, non-Aboriginal and Aboriginal people, established Canadians and immigrants.

The story of lifelong learning in Canada gets off to a promising start. Most Canadian babies (94%) are born at a healthy weight. The vast majority of preschoolers achieve average or above-average development in cognitive processes, language acquisition and communications abilities, muscle growth and physical co-ordination.

By the age of 15, Canadian students have reading, math, science and problem-solving skills that are above the OECD average. A solid majority of Canadian teens rate their health as good to excellent, and more than nine in 10 are completing high school—a gain of eight percentage points over just 15 years.

The proportion of young adults attending post-secondary institutions has increased from 25% in 1990 to 37% in 2005. More Canadians than ever are topping up their university credentials with graduate degrees.

In fact, 45% of our working-age population is now equipped with some form of post-secondary education—the third-highest level worldwide.

Within the overall population, specific groups are also making progress.

Among Aboriginal Peoples, for example, there was a four-fold rise over eight years in the proportion of children who participated in a preschool program designed specifically for Aboriginal children. Aboriginal youth are also increasingly likely to stay in school and to pursue higher education. Indeed, 30% of Aboriginal adults had completed a college diploma or trades certificate in 2001, similar to the rate for non-Aboriginal Canadians.

The *State of Learning in Canada* also shows that for many Canadians, a zest for learning persists into adulthood. Whether through formal or informal mechanisms, arranged through employers or by themselves, more than one in three adults sign up for courses, training and advanced certification.

In their personal lives as well, Canadians continue to expand their horizons well into their senior years. Two-thirds of Canadian adults belong to at least one club or other voluntary group, while 45% of working-age Canadians donate, in total, almost 2 billion hours a year to volunteer activities.

# STATE OF LEARNING IN CANADA 2007

## Synthesis: What this report tells us

And yet, even as we cheer these successes, other sobering findings come to light.

For example, one in four children enters Grade 1 with learning or behavioural problems that could affect their future success in academics, and life in general. Once in school, many children are bullied; others feel disengaged from their peers and society.

In class, too few students are knowledgeable about Canadian history and politics, a trend that may be tied to shrinking civic engagement and declining voter turnout.

With only one in five schoolchildren active enough for optimal growth and development, there is also a rise in health problems such as obesity. Indeed, nearly one in three youth aged 12 to 17 was overweight or obese in 2004, double the rate 25 years earlier. At the same time, many others arrive at school hungry. World Health Organization figures show that, compared to OECD countries, Canadian children are among the least likely to eat breakfast on school days.

Despite a steady decline in the dropout rate in recent years, more youth in Canada fail to finish high school than in many other OECD countries. Our dropout rate of 9% is more than twice Norway's.

Perhaps one of the most striking anomalies in Canada's learning profile is that, despite a strong formal education system, 42% of the adult population—9 million people—lack the prose and document literacy skills needed to meet the demands of today's world. The health literacy of Canadians is even lower. And, notwithstanding rising public concern over Canada's literacy scores, there has been no improvement in the rates over the past decade.

The rate of adult participation in training increased slightly to 35% in 2002, up from 29% in 1997. And in 2002, only one-quarter of the adult workforce received some type of employer support for their training, a rate little changed from 1997. People in greatest need, including recent immigrants, older workers and dropouts from the formal education system, are least likely to get further training.

But perhaps one of the most worrisome observations to emerge from the *State of Learning in Canada* is that full equality is more fiction than fact.

Preschoolers from low-income families are up to twice as likely as those from higher income families to be delayed in measures of cognitive development, knowledge of numbers, and the capacity to understand spoken words and written symbols.

The report also reveals a web of links between socio-economic status, learning and health. More prosperous members of society tend to have more education and enjoy higher health-literacy skills and better health.

The impact of socio-economic status on learning is particularly stark when entire populations are at risk. Among Aboriginal Peoples, for instance, high rates of adult unemployment and single parenthood mean more than four in 10 children are growing up in poverty, in conjunction with poor nutrition and health, and inadequate housing.

Against this backdrop, about 90% of Aboriginal children lack access to suitable early childhood programming. Except among the Inuit, declining numbers of Aboriginal people are speaking their ancestral languages. Aboriginal youth are 2.5 times more likely to leave high school early than non-Aboriginal students. And only 8% of Aboriginal high-school graduates move on to complete a university education, compared to 28% of non-Aboriginal Canadians. Moreover, approximately 60% of Aboriginal adults living in Manitoba and Saskatchewan cities had inadequate literacy levels—at least 15 percentage points above the rest of the population.

At a population-wide level, other gaps are becoming apparent as well. For instance, while the "gender gap" used to favour men, girls and women are now leading in many indicators of learning, from fine motor development and communication skills among preschoolers, to high-school completion rates, post-secondary attendance and participation in formal workplace training.

Also, many immigrants find that they are unable to secure recognition for their past learning, experience and credentials.

Other setbacks occur with the passage of years. Overall, levels of literacy decline with age. Of particular concern is the fact that seven of eight seniors lack the literacy skills needed to deal competently with health information, yet they tend to be the leading consumers of health services.

# STATE OF LEARNING IN CANADA 2007

## *Synthesis: What this report tells us*

---

Learning brings many advantages to the people who pursue it, including greater satisfaction in their professional and personal lives, more civic engagement, and better chances for good health. An educated and literate populace boosts economic productivity and strengthens communities.

Despite Canada's progress, there is no room for complacency. And addressing the issues will require the participation of many sectors of society.

Indeed, raising adult literacy and promoting a culture of lifelong learning must be a collaborative effort involving governments, business, labour, institutions, communities and individuals. All must work together to strengthen literacy services, overcome barriers to work-related learning and promote community engagement.

Moreover, the efforts must begin at the youngest ages. While more than half of all preschoolers are cared for outside the home, Canada spends less on early childhood services than the other OECD countries reporting comparable information.

We must also build up our knowledge about formal education and lifelong learning. For example, we need to develop a comprehensive set of pan-Canadian indicators to monitor the progress of early childhood development and learning, from the prenatal period through to the school years. There are also gaps in our understanding of patterns and trends in the acquisition of literacy skills and knowledge in core subjects such as reading, math, science and civics.

Much also remains unknown about the factors influencing children's health, the relationship between health and learning, and how to ensure all schools are safe, inviting places where children want to stay until graduation.

At the post-secondary level, there are no direct, Canada-wide measures of quality, and it is difficult to gauge whether graduates are being equipped with the skills and knowledge needed to succeed in a globally competitive economy.

We must broaden our understanding of learning "success" among Aboriginal Peoples. Indicators of Aboriginal learning should measure more than just years of schooling and performance on standardized assessments. Such measures are valid and can help predict future success in the Canadian economy. However, they do not fully recognize that Aboriginal Peoples take a holistic view of learning that includes intellectual, spiritual, cultural and physical aspects of being.

Canada's literacy challenges are highlighted in this inaugural *State of Learning in Canada* report. In addition to weaving through each chapter as a vital component of all facets and stages of lifelong learning, literacy is the focus of a special feature for the 2007 *State of Learning in Canada*. The special feature explores the meaning and importance of literacy in Canada and around the world—in particular, the importance of literacy to the maintenance of an equitable, democratic, prosperous society and to individuals' overall quality of life. The central theme is that there is no room for complacency with respect to Canada's literacy challenge. The stakes—for this generation and the next—are simply too high.

The Canadian Council on Learning and its five knowledge centres have been working with their partners across Canada to understand the issues, to refine the questions and to search for viable answers. As our knowledge expands, we will continue to share it with Canadian decision-makers and the public at large, through annual updates of the *State of Learning in Canada* and detailed thematic reports.



# INTRODUCTION

## THE VALUE OF LIFELONG LEARNING

Learning begins the moment a newborn opens its eyes and senses the world around it. Learning to walk and talk, to love and trust family members, to play alone and with others—these are important steps that will influence a child’s potential for happiness and success throughout life.

Before long, the school years start. For most Canadian children, this is a time of boundless opportunity, exploration and change. It is a time to acquire knowledge, make friends, develop their athletic or artistic skills, to learn about life and to learn about themselves. And based on international testing Canadian children perform well in school—their scores in reading, mathematics, science and problem solving are among the highest in OECD member countries.

Most young Canadians then enrol in university, college or vocational training schools. Some will drop out; others will go on to earn one or more graduate degrees. Overall, our country has one of the highest levels of post-secondary completion among advanced, industrialized countries.

And once Canadian youth leave the formal school system, many continue learning throughout their lives—at work, at home, and as active citizens in their communities. Some take specialized training to polish their skills or to climb higher up the career ladder. Others sign up for personal interest courses, join clubs, serve as volunteers, or surf the internet to stay connected and informed.

Canadians are becoming increasingly aware of the economic benefits of more education, for individual citizens, and for the competitiveness of our country. We are also coming to appreciate the contributions that learning makes to our health and well-being, and to the strength and cohesion of our communities.

Nonetheless, there are serious signs of trouble. We ignore them at our peril.

An astounding number of Canadian adults cannot read, write or do arithmetic at the level required to participate fully in today’s globally competitive economy. And literacy and numeracy skills decline with age, indicating that many Canadians are not using these skills.

In addition, the amount of workplace training available in Canada is low compared to many other developed countries. And the workers with the lowest levels of literacy—arguably those who would benefit most from further training—are the least likely to have access to employer-supported training.

Our large and growing immigrant population is also trapped in a paradox: while Canada needs to count on our current citizens and those who will join us from abroad, we must provide immigrants with the language, literacy and skills training they need to flourish within our society and help sustain our economic growth.

*The Canadian Council on Learning is an independent, not-for-profit corporation funded through an agreement with Human Resources and Social Development Canada. Its mandate is to promote and support evidence-based decisions throughout all stages of life, from early childhood through to the senior years. For more information, visit [www.ccl-cca.ca](http://www.ccl-cca.ca).*

*More than nine in 10 Canadians (92%) believe there is a strong correlation between education and success in life, according to a recent poll commissioned by the Canadian Council on Learning.*

# INTRODUCTION

The solution, according to most experts, is to foster a learning culture that goes beyond formal education to encompass all forms of structured and unstructured learning—in the workplace, the community and the home. In this respect, the United Nations Educational, Scientific and Cultural Organization (UNESCO) developed a useful framework comprising four key pillars of learning: learning to know, to do, to live together and to be. (See text box.)

This framework inspires much of CCL's work.

## The four pillars of learning

Learning to know	<ul style="list-style-type: none"><li>• developing the foundation of skills and knowledge needed to function in the world</li><li>• includes literacy, numeracy, general knowledge and critical thinking</li></ul>
Learning to do	<ul style="list-style-type: none"><li>• the acquisition of applied skills</li><li>• may encompass technical and hands-on skills and knowledge</li><li>• is closely tied to occupational success</li></ul>
Learning to live together	<ul style="list-style-type: none"><li>• developing values of respect and concern for others, fostering social and inter-personal skills, and an appreciation of cultural diversity</li><li>• contributes to a cohesive society</li></ul>
Learning to be	<ul style="list-style-type: none"><li>• personal discovery, creativity and self-knowledge that develop the whole person, including the mind, body and spirit</li><li>• fosters a healthy balance in life</li></ul>

## MONITORING CANADA'S PROGRESS IN LEARNING

While the importance of lifelong learning is widely acknowledged, there is no comprehensive and sustained monitoring of Canada's performance in this area.

The Canadian Council on Learning is helping to fill this gap.

In May 2006, CCL launched the first edition of the Composite Learning Index (CLI), an annual report on 15 factors—or indicators—of learning. The 2006 CLI revealed that while Canada is comparatively good at engaging Canadian youth in formal education, learning does not extend as well into adulthood. The CLI also identified significant differences in learning conditions among Canadian communities.

The first annual *State of Learning in Canada* report expands on the CLI to assess Canada's progress in developing a culture of lifelong learning. This inaugural report, prepared in collaboration with CCL's knowledge centres, describes the principal indicators that influence learning—in early childhood, in the school years, as adults and within Canada's Aboriginal population.

In addition to providing detailed and comprehensive data, *State of Learning in Canada* analyzes the underlying issues and trends. Each annual State of Learning report will also contain a feature section that delves into an important theme or issue. The 2007 report includes a special focus on literacy.

Literacy is fundamental to learning. However, the unique literacy challenges facing Canada are not well understood. Literacy is a priority for CCL, and the goal of the feature is to present a comprehensive overview of Canada's literacy landscape and to explore the factors that shape it.

The Canadian Council on Learning has five knowledge centres—consortia of organizations that advance the research and state of knowledge in specific learning domains:

- early childhood learning
- health and learning
- adult learning
- work-related learning
- Aboriginal learning

## WHAT YOU WILL FIND IN THE *STATE OF LEARNING IN CANADA* REPORT

This report examines many of the factors that contribute to successful lifelong learning—from early childhood, through the schools years and into adulthood. It also takes a special look at the link between health and learning, and at the learning challenges faced by Canada's Aboriginal Peoples. This year, CCL's *State of Learning in Canada* also features an in-depth examination of literacy in Canada—literacy is a key building block for learning at all ages and in all aspects of life.

**Early childhood learning**—Early childhood learning sets the stage for a child's success, not only in school but throughout life. The chapter examines the factors influencing early childhood development, from birth weight to opportunities for play. It also analyzes selected pan-Canadian indicators and highlights some of the leading provincial and regional initiatives to further our understanding of early learning.

**Learning in school**—Formal education teaches essential skills and knowledge, and should also foster a love of learning that will last long after the school years end. This chapter examines indicators related to basic skills, educational attainment and attendance, citizenship education and healthy schools.

**Adult learning**—Lifelong learning is not yet a reality for all Canadians. This chapter presents selected indicators related to literacy, work-related learning, learning in the community and personal development among Canadian adults. It also explores common barriers to adult learning.

**Aboriginal learning**—While current indicators reveal improvements in learning outcomes among Aboriginal people in Canada, there is a need to broaden the definition of how success is measured. This chapter examines available indicators of lifelong learning and shows why more work is needed to measure progress effectively among First Nations, Métis and Inuit peoples.

**Learning and literacy: Canada's challenges**—Literacy rates in Canada are well below what many people would expect from an advanced nation with a well-developed educational sector. This chapter explores the meaning and importance of literacy in Canada and around the world—in particular, the importance of literacy to the maintenance of an equitable, democratic society and to individuals' overall quality of life. It analyses a number of indicators, including two major surveys conducted in 1994 and 2003 that revealed more than four in 10 adult Canadians have literacy skills below the international standard considered necessary to participate fully in a modern society. The report's central theme is that Canada is facing a major literacy challenge—there is no room for complacency. The stakes are simply too high.

Each chapter introduces and defines its particular learning area, and presents indicators relevant to the topic. Individual indicators are then explored in terms of their importance and applied as measures of the evolving state of learning in Canada. Where possible, Canadian indicators are compared over time, and to relevant data from other countries.

The chapters conclude with a summary of where Canada currently stands, and what further information is required to gauge success in each learning area. Every chapter ends with a final section entitled "What will CCL do?" which outlines CCL's plans for research and analysis in the years ahead.

Ongoing learning is the foundation of success for individuals, their communities and our country as a whole. Through the annual *State of Learning in Canada* reports, the Canadian Council on Learning aims to stimulate an active dialogue on the role of learning in our society, and move toward our vision of being a catalyst for lifelong learning across Canada.



# EARLY CHILDHOOD LEARNING

## 2.1 Introduction

Children's experiences in the first years of life have a lasting impact on their development and future learning. As Nobel laureate James J. Heckman put it, "Learning starts in infancy, long before formal education begins, and continues throughout life .... Early learning begets later learning and early success breeds later success."<sup>1</sup>

To put it in terms of the *four pillars of learning*, early childhood is when children learn to know, to do, to live together and to be.

As children develop, they adopt ever more complex skills. Their ability to use their senses and control their movements shapes their emotional and social development. As they mature emotionally and socially, new cognitive abilities, such as the use of language, emerge.

An important aspect of children's learning is that it occurs in stages. There are specific periods during which a young brain will develop particular skills, such as the ability to see with both eyes, to control emotions and to speak. If a child does not acquire these skills at the right stage, it may be difficult to catch up later.<sup>2</sup>

### ATTITUDES TOWARD EARLY LEARNING

The Canadian Council on Learning's 2006 Survey of Canadian Attitudes toward Learning found that:

- Canadians think learning at all stages of life is critical to success
- Canadians think that early childhood learning should focus more on attitudes—such as fostering a positive attitude toward learning—than on school readiness

### THE WIRED BRAIN

*Human development is not a matter of nature versus nurture, but of nature and nurture working together. In response to stimuli from the environment, the nerve cells of the brain form physical connections and pathways. This brain wiring process, which begins before birth and continues through life, is most intensive during the first three years of development.<sup>3</sup>*

### CARE AND NEGLECT

*A study of children adopted from foreign institutions demonstrates the extent to which serious early neglect can affect a child's development. The research revealed that children reared in privation had lower IQs at the age of four than children raised in caring homes. Perhaps more surprising was that the difference in brain function persisted at age 11, even after the children had spent seven years with adoptive parents.<sup>4</sup> Animal research shows that intense stress early in life can lead to brain damage,<sup>5</sup> underscoring the strong link between early care and a later ability to think and learn.*

- There are more than 2 million children under the age of six in Canada.
- The proportion of children under six years of age declined from 9% of the total Canadian population in 1975 to 6% in 2005.<sup>6</sup>

1 Heckman, James J. *Invest in the Very Young* (Chicago: Ounce of Prevention Fund and the University of Chicago Harris School of Public Policy Studies, 2000). Available at [www.ounceofprevention.org](http://www.ounceofprevention.org). Accessed Sept. 26, 2006.

2 Norrie McCain, Margaret and J. Fraser Mustard. *Early Years Study Final Report* (Government of Ontario, Ontario Children's Secretariat, 1999). Available at [www.children.gov.on.ca](http://www.children.gov.on.ca). Accessed Oct. 14, 2006.

3 Norrie McCain, M. *Early Years Study Final Report*, 1999.

4 Beckett, C., et al. "Do the Effects of Early Severe Deprivation on Cognition Persist into Early Adolescence? Findings from the English and Romanian Adoptees Study," *Child Development*, 77(3) (2006). pp. 696–711.

5 Bremner, J. D. "Does Stress Damage the Brain?" *Biological Psychiatry*, 45 (1999). pp. 797–805. Also, McEwen, B. S. "The Effects of Stress on Structural and Functional Plasticity in the Hippocampus," *Neurobiology of Mental Illness* (New York: Oxford University Press, 1999). pp. 475–493.

6 Statistics Canada. "Estimates of Population by Age and Sex for Canada, Provinces and Territories," CANSIM (Ottawa). Table 051-0001.

## 2.2 Indicators of Early Childhood Development

To understand the state of early childhood learning in Canada, we need to examine four main areas of development: Physical, cognitive, language and communication, and emotional and social development. These areas are linked and interdependent.

Measurements of motor skills, vocabulary, emotional control and social interactions, for example, tell us about how Canadian children are developing and maturing. We also need to know about the environmental factors that influence early childhood learning. The most effective measurements are those that are repeated at regular intervals and which therefore reveal trends.

In the pages ahead, we explore the state of early childhood development in Canada according to the following six indicators:

- birth weight
- physical development, including fine and gross motor development
- cognitive development
- language and communications skills development
- emotional and social development
- early childhood education and care

We review the research on these indicators, describe what is known about Canada's performance and progress, and highlight areas for further attention and investigation.

### BIRTH WEIGHT

The link between low birth weight and risks to later development and learning has been established for a long time. A recent study, for example, found that low birth weight is associated with lower cognitive development at ages seven, 11 and 16.<sup>7</sup>

Birth weight can also provide an indication of the environmental factors influencing a child's health and learning, as low birth weight is associated with poor nutrition, smoking, and alcohol and drug use.<sup>8</sup>

Societal factors affecting birth weight include a greater prevalence of fertility treatments and the increased tendency for women to delay childbearing into their 30s or later.<sup>9</sup>

### What do we know about Canada's progress?

In 2003, 6% of Canadian babies were born with low birth weights (weighing less than 2.5 kg, or 5.5 lb.), a proportion that has remained constant for the past 25 years. The frequency of low birth weights in Canada is slightly below the average among countries of the Organisation for Economic Co-operation and Development (OECD). The Scandinavian countries, Netherlands and South Korea have the smallest proportion of low-weight births.

### TOOLS OF THE TRADE

*Under an historic agreement on early childhood development reached by federal, provincial and territorial governments in September 2000, the Government of Canada promised to invest in programs and services for children under six and their families. All governments also undertook to report annually on progress in this vital field. This agreement has expanded the use of, and interest in, assessment and monitoring tools for early childhood development.*

7 Jefferis B., C. Power, and C. Hertzman. "Birthweight, childhood socioeconomic environment, and cognitive development in the 1958 British birth cohort study," *British Medical Journal*, 325(7359):305 (Aug. 10, 2002).

8 Public Health Agency of Canada. *Healthy Development of Children and Youth: The Role of the Determinants of Health* (Ottawa: Health Canada, 1999). Available at [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca). Accessed Oct. 14, 2006.

9 Organisation for Economic Co-operation and Development. *Health at a Glance: OECD Indicators 2005* (Paris: OECD, 2005).

### Percentage of babies born with low birth weights, 1980–2003

	1980	1990	2000	2003
Australia	5.6 <sup>1983</sup>	6.1	6.3	6.4 <sup>2002</sup>
Canada	5.8	5.5	5.6	5.8 <sup>2002</sup>
Denmark	5.8	5.2	4.9	5.5
Finland	3.9	3.6	4.3	4.1
France	5.2 <sup>1981</sup>	5.3	6.4	6.6
Germany	5.5	5.7	6.4	6.8
Iceland	3.4	2.9	3.9	3.1
Italy	5.6	5.6	6.7	6.5 <sup>2002</sup>
Japan	5.2	6.3	8.6	9.1
Korea	..	2.6 <sup>1993</sup>	3.8	4.1
Netherlands	4 <sup>1979</sup>	4.8	5.1	5.4 <sup>2002</sup>
New Zealand	5.8	6.2	6.4	6.1
Norway	3.8	4.6	5	4.9
Sweden	4.2	4.5	4.4	4.5
Switzerland	5.1	5.1	5.9	6.5 <sup>2002</sup>
United Kingdom	6.7	6.7	7.5	7.6
United States	6.8	7.1	7.6	7.9
Median	5.6	5.6	6.3	6.6

Source: OECD, *Health at a Glance 2005*

### PHYSICAL DEVELOPMENT AND MOVEMENT

Physical development in the early years includes the development of the body, the senses, and skills such as coordination and balance. A vital component of physical maturation is motor development, which includes increases in strength, coordination and movement control. Motor development affects exploration, play and interaction with peers, which in turn influence cognitive, language and social development.

In the first two years of life, a child experiences rapid motor development. What begins as a few spontaneous and reflexive movements progresses into purposeful arm motions, greater balance, and a newfound ability to sit, crawl, stand and walk.

From ages two to six, children usually learn to run, jump, skip, climb, catch and throw—skills that are critical for play, organized sports and recreational activities. Fine motor skills are also necessary to prepare children for common school tasks, such as controlling a pencil and turning pages.

Many factors affect the development of motor skills, even before birth. A mother's consumption of tobacco or alcohol during pregnancy,<sup>10</sup> or maternal stress or depression, can have negative impacts. Children who live in conditions of poverty, homelessness or family violence are also more likely to suffer delays in developing basic motor skills.<sup>11</sup>

A child who does not master gross and fine motor skills may struggle at school or develop feelings of inadequacy and frustration.<sup>12</sup>

### What do we know about Canada's progress?

#### Gross motor skills

Gross motor skills are required for the movement of larger muscles in the arms, legs, torso and feet. These skills were last assessed in the National Longitudinal Survey of Children and Youth (NLSCY) in 2000–2001. Nearly 90% of children aged four and five were found to have average or above-average gross motor skills. There was little difference between boys and girls.

#### Gross motor skills, four- and five-year-olds, 2000–2001

	AVERAGE OR ABOVE	DELAYED
Boys	88.8%	11.2%
Girls	89.7%	10.3%
Both sexes	89.2%	10.8%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

#### Fine motor skills

The NLSCY also assessed fine motor skills, which involve the coordinated movement of the hands, fingers, toes, wrists and other smaller muscles. In 2002–2003, 88% of four- and five-year-olds were considered to have average or above-average fine motor skills. More boys (14%) were delayed in their development than girls (9%).

#### Fine motor skills, four- and five-year-olds, 2002–2003

	AVERAGE OR ABOVE	DELAYED
Boys	85.6%	14.4%
Girls	91.1%	8.9%
Both sexes	88.3%	11.7%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

10 Trasti N. and T. Vik. "Smoking in Pregnancy and Children's Mental and Motor Development at Age 1 and 5 Years," *Early Human Development*, 55(2) (1999), pp.137–47. Also, Autti-Ramo, I. and M. Granstrom. "The Psychomotor Development During the First Year of Life of Infants Exposed to Intrauterine Alcohol of Various Duration: Fetal Alcohol Exposure and Development," *Neuropediatrics*, 22 (1991), pp.59–64.

11 Solan, H. and R. Moslan. "Children in Poverty: Impact on Health, Visual Development and School Failure," *Journal of Optometric Visual Development*, 28 (1997) pp.7–25.

12 Doherty, Gillian. *Zero to Six: The Basis for School Readiness* (Human Resources Development Canada, 1997).

# EARLY CHILDHOOD LEARNING

## COGNITIVE DEVELOPMENT

Cognitive development involves mental processes such as thinking and reasoning. Every child develops at a different pace, but cognitive development generally tends to occur in stages.

### Cognitive development milestones<sup>13,14</sup>

AGE	
Zero–one month	newborn reflexes; recognition memory for simple stimuli
One–four months	deferred imitation of adults' facial expressions; some awareness of object permanence; limited anticipation of events
Four–eight months	sensibility to changes in number or amount of things; development of object concept; use of shape, texture, and colour to identify objects; use of own body but also of simple landmark cues to locate objects in space
Eight–12 months	ability to retrieve an object from the first location in which it is hidden; categorization of social stimuli (for example, human versus non-human movement patterns); simple problem solving by combining sub-goals
12–18 months	classification of objects according to physical similarities; exploration of objects by acting on them in novel ways; experimenting with actions when solving problems
18–36 months	at age two, memory span of about two items; use of naming and looking as simple memory strategies; ability to draw scribbles; elementary planning capabilities
Three years	more complex thematic object classification (objects that function together or complement one another); recognition performance for 50-plus items; understanding that thinking is something that takes place inside oneself; basic understanding of numbers 1–10; ability to use a symbol for a real-world event, as component of problem solving; child's scribbles now become pictures
Four years	basic understanding of how one can take the perspective of another; understanding of <i>pretend</i> and <i>make-believe</i> ; enhanced categorization skills; concept of cardinality (that the last number said when counting is the total); recall of three or four items can occur
Five–six years	understanding of conservation (e.g. the same amount of liquid in a beaker can look like more or less depending on the shape of the container); understanding relations such as <i>bigger</i> and <i>smaller</i> ; drawings become more realistic; can distinguish between theory and evidence

Many factors can promote or hinder cognitive development. Development is most likely to progress when:

- parents encourage learning through games and the use of appropriate play materials,<sup>15</sup>
- books are available and parents read to their children,<sup>16</sup>
- mothers encourage their children, show affection and engage in their activities,<sup>17</sup>
- children in child care enjoy high-quality care with trained caregivers and organized, age-appropriate and stimulating activities,<sup>18</sup>

- children are raised in a safe and comfortable neighbourhood<sup>19</sup> and a clean environment,<sup>20</sup>
- children are not exposed to tobacco, alcohol or drugs in the womb,<sup>21</sup> and
- children from high-risk environments are integrated with those living with more advantages.<sup>22</sup>

### What do we know about Canada's progress?

The National Longitudinal Survey of Children and Youth applied two tests to assess cognitive development among children aged four and five.

- The "Who Am I?" Test involved copying and writing tasks designed to gauge a child's ability to conceptualize and reconstruct geometric shapes, and to understand and use symbols like letters and words.
- The Number Knowledge Assessment examined a child's early comprehension of numbers.

By both measures, most Canadian children demonstrated an average or advanced level of development in 2002–2003. However, significant differences were noted between children from different socio-economic backgrounds.

In the "Who Am I?" Test, 21% of children from low-income families were considered to have delayed development, compared to 13% of other children. In the Number Knowledge Assessment, 26% of children from low-income families showed delayed development, compared to 14% of other children.

### Cognitive development of four- and five-year-olds by family income, 2002–2003

	DELAYED	AVERAGE	ADVANCED
<b>"Who Am I?" Test</b>			
Total	14.3%	74.5%	11.2%
Above LICO *	13.1%	75.2%	11.8%
Below LICO	21.0%	70.7%	8.3%
<b>Number Knowledge Assessment</b>			
Total	15.8%	72.7%	11.6%
Above LICO	14.0%	73.7%	12.4%
Below LICO	25.5%	67.1%	7.4%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth  
\* Low income cut-off

13 Berk, L. E. *Child development*, Second Canadian Edition (Toronto: Pearson Education Canada, 2006).

14 Bukatko, D. and M. W. Daehler. *Child development: A Thematic Approach*, Fifth Edition (Boston: Houghton Mifflin, 2004).

15 Bradley, R. H., et al. "The Home Environments of Children in the United States. Part I: Variations by Age, Ethnicity, and Poverty Status," *Child Development*, 72 (2001). pp. 1,844–1,867.

16 Lefebvre, P. and P. Merrigan. *Family Background, Family Income, Maternal Work and Child Development* (Ottawa: Human Resources Development Canada, 1998). Also, Lipps, G. and J. Yiptong-Avila. *From Home to School—How Canadian Children Cope* (Ottawa: Statistics Canada's Culture, Tourism and the Centre for Education Statistics, 1999). Catalogue no. 89F0117XIE. Available at www.statcan.ca. Accessed Sept. 11, 2006.

17 Keating, D. P. and F. K. Miller. "Individual Pathways in Competence and Coping: From Regulatory Systems to Habits of Mind," *Developmental Health and the Wealth of Nations: Social, Biological and Educational Dynamics* (New York: Guilford Press, 1999). pp. 220–234.

18 Early Childhood Learning Knowledge Centre. "Why is High-quality Child Care Essential? The Link Between Quality Child Care and Learning," *Lessons in Learning* (Ottawa: Canadian Council on Learning, 2006) Available at www.ccl-cca.ca. Accessed Sept. 9, 2006.

19 Kohen, D., C. Hertzman and M. Weins. "Environmental Changes and Children's Competencies". *Technical Report, W-98-15E* (Ottawa: Applied Research Branch of Human Resources Development Canada, 1998).

20 Bradley, R. H. "The Home Environments of Children in the United States," *Child Development*.

21 Fried, P.A. "Tobacco Consumption During Pregnancy and its Impact on Child Development," *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development). Available at www.excellence-earlychildhood.ca. Accessed Oct. 12, 2006.

22 Willms, J. D. "Quality and Inequality in Children's Literacy: The Effects of Families, Schools, and Communities," *Developmental Health and the Wealth of Nations: Social, Biological and Educational Dynamics* (New York: Guilford Press, 1999). pp. 72–93.



Although the risk of developmental delay is greater for children in economically disadvantaged families, it is important to note that children from all socio-economic backgrounds can experience developmental delay. In fact, the Ontario Child Health Study demonstrated that while children in lower-income families were more likely than children from wealthier families to have cognitive or behavioural disorders, the greatest number of children with these difficulties is actually from middle-income families.

### Developmental disorders by family income, ages four to 16

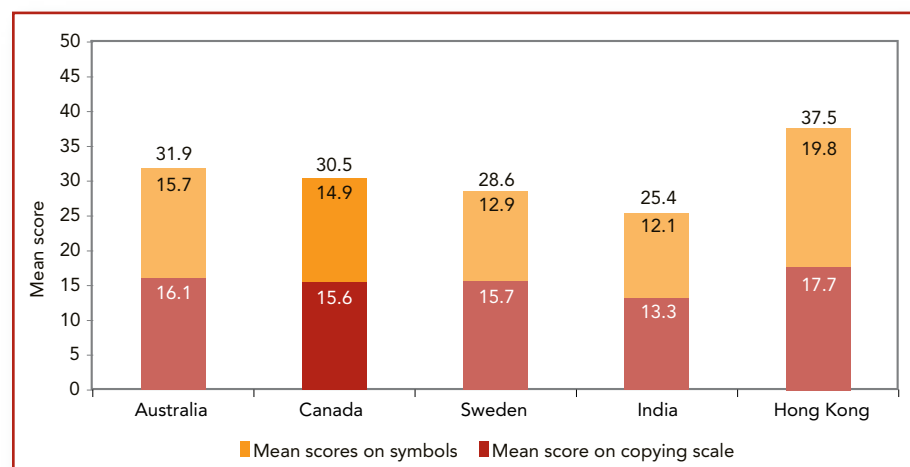
FAMILY INCOME	RISK OF ONE OR MORE DISORDERS (PER 100 CHILDREN)	PERCENTAGE OF TOTAL CASES OCCURRING AT EACH INCOME LEVEL
<\$10,000	36.3	14.5%
\$10,000–\$25,000	17.4	26.5%
\$25,000–\$50,000	16.8	48.7%
>\$50,000	14.9	10.3%
All Income Levels	18.2	100.0%

Source: Norrie McCain, Margaret and J. Fraser Mustard. *Early Years Study Final Report* (Government of Ontario, Ontario Children's Secretariat, 1999)

### International comparisons

A 2002 study used the "Who Am I?" Test to compare the ability of six-year-old children in five countries to understand and copy shapes and symbols. Canadian children scored higher overall than children in Sweden and India, about the same as those in Australia, but lower than children in Hong Kong.

### International comparison of "Who Am I?" Test results, six-year-olds, 2002



Source: de Lemos, Molly. *Patterns of Young Children's Development: An International Comparison of Development as Assessed by Who Am I?* (Gatineau, Que.: Human Resources Development Canada, 2002).

## LANGUAGE AND COMMUNICATION SKILLS DEVELOPMENT

From birth to age six, oral language is pivotal for a child's development.<sup>23</sup> In primary and elementary schools, the acquisition of language has an impact on a child's capacity to read and write,<sup>24</sup> socialize<sup>25</sup> and understand what is going on in the classroom.<sup>26</sup>

For most children, learning to speak seems natural and effortless. This is not, however, always so. In fact, about 8–9% of young children suffer from speech difficulties.<sup>27</sup> Speech impediments, especially if they persist past the age of five, increase the risk of social, academic and emotional problems later in life.<sup>28</sup>

*Canadian researchers are leaders in the study of language and literacy impairments and their association with behavioural problems from infancy into the school years. Canadian researchers of the Canadian Language and Literacy Research Network (CLLRNet) are currently studying how early verbal delays are linked to social adjustment.*

23 Tomblin, B. "Literacy as an Outcome of Language Development and its Impact on Children's Psychosocial and Emotional Development," *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed on Sept. 12, 2006.

24 Ehri, L. C., et al. "Phonemic Awareness Instruction Helps Children Learn to Read: Evidence from the National Reading Panel's Meta-analysis," *Reading Research Quarterly*, 36 (2001), pp. 250–287. Also, Storch, S. A. and G. J. Whitehurst. "Oral Language and Code-related Precursors of Reading: Evidence from a Longitudinal Structural Model," *Developmental Psychology*, 38 (2002), pp. 934–945.

25 Cohen, N. J. *Language impairment and psychopathology in infants, children, and adolescents* (Thousand Oaks, CA: Sage, 2001).

26 Whitehurst, G. J., and C. J. Lonigan. "Child Development and Emergent Literacy," *Child Development*, 69 (3) (1998), pp. 848–872.

27 National Institute on Deafness and Other Communication Disorders. *Statistics on voice, speech, and language* (Bethesda, MD: National Institute on Deafness and Other Communication Disorders; National Institutes of Health). Available at [www.nidcd.nih.gov](http://www.nidcd.nih.gov). Accessed Sept. 14, 2006.

28 Glogowska, M., et al. "Early Speech-and-language-impaired Children: Linguistic, Literacy, and Social Outcomes," *Developmental Medicine and Child Neurology*, 48 (2006), pp. 489–494. Also, Cohen, N.J. "The Impact of Language Development on the Psychosocial and Emotional Development of Young Children," *Encyclopedia on Early Childhood Development*, Online version. (Montreal: Centre of Excellence for Early Childhood Development). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Sept. 12, 2006.

# EARLY CHILDHOOD LEARNING

Early language development generally occurs in the following sequence:<sup>29</sup>

Birth to one year	sounds and non-verbal communicative acts; from eight to 12 months, there is more control over vocalization and the use of invented words, gesturing and gaze direction
One to two years	the first meaningful words are spoken and a vocabulary begins to emerge
Two to three years	the ordering of words and sentences points to the development of grammar skills
Three to five years	continued increase in sentence length and the formation of complex sentences signal the consolidation and advancement of language learning

Factors influencing language learning include:<sup>30</sup>

- a family history of language or learning difficulties,
- gender, as males have a higher rate of language and learning difficulties, and
- neurological injury or other types of physical disorders that lead to learning difficulties.

External factors also affect language development, including:

- how much parents speak to the child and the complexity of their vocabulary and grammar,<sup>31</sup>
- how much parents or other caregivers read to the child, particularly as this develops an emotional closeness, and
- the mother's ability to respond verbally to the focus of the child's attention and activities.<sup>32</sup>

Reading with the child, often and regularly, promotes language development, especially if the child is asked questions and is engaged in the activity. Other ways to promote language include reciting poems, teaching the child to recognize letters and their sounds, and teaching children to recognize and write their names.<sup>33</sup>

## What do we know about Canada's progress?

### 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 out by an interviewer.

Most Canadian children assessed with the PPVT-R since 1994–1995 showed average or advanced progress in this area. The proportion of children scoring in the delayed range showed a slight decline, from 16% in 1994–1995 to 13% in 2002–2003, the most recent year for which statistics are available.

### PPVT-R test of language development, four- and five-year-olds, 1994–1995 to 2002–2003

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%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

More than one-quarter of children from low-income families were considered to have delayed receptive vocabulary development, compared to 11% of other children.

### PPVT-R test of language development, four- and five-year-olds by family income, 2002–2003

	DELAYED	AVERAGE	ADVANCED
Canada	13.1%	69.6%	17.3%
Above LICO *	10.7%	70.2%	19.1%
Below LICO	26.1%	66.4%	7.6%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

\*Low income cut-off

<sup>29</sup> Partly adapted from De Maio, Louis J. *Stages of Language Development* (Moorhead, MN: Parent-Child Communication Program of Minnesota State University). Available at <http://www.mnstate.edu/pccp/>. Accessed Oct. 13, 2006.

<sup>30</sup> American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, text revision (Washington, D.C.: 2000).

<sup>31</sup> Hart, B. and T. R. Risley. *Meaningful differences in the everyday experience of young American children* (Baltimore, U.S.: Paul H. Brookes Publishing, 1995).

<sup>32</sup> Tamis-LeMonda, C. S., M. H. Bornstein and L. Baumwell. "Maternal Responsiveness and Children's Achievement of Language Milestones," *Child Development*, 72 (2001). pp. 748–767.

<sup>33</sup> Canadian Council on Learning. "How Parents Foster Early Literacy," *Lessons in Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Feb. 1, 2006.

### 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 2002–2003, almost 90% of children aged four to five had average or better communication skills. However, more boys (14%) than girls (8%) fell within the range considered delayed.

#### Communication skills of four- and five-year-olds, 2002–2003

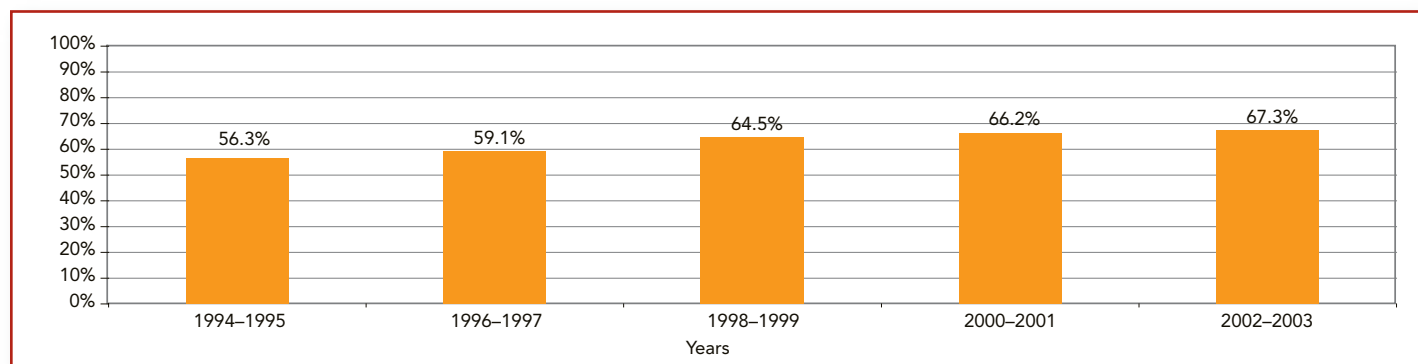
	Average or above	Delayed
Boys	86.5%	13.5%
Girls	92.5%	7.5%
Both sexes	89.4%	10.6%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

### Reading to children

A higher proportion of children under the age of six were being read to daily by their parents or other adults in 2002–2003 (67%) than in 1994–1995 (56%), according to the NLSCY. Again, the survey demonstrated a link between a family's socio-economic status and its likelihood of daily reading. In 2002–2003, 58% of children in low-income families were read to daily, compared to 69% of other children.

#### Proportion of children, from birth to five years, being read to daily, 1994–1995 to 2002–2003



Source: Statistics Canada, National Longitudinal Survey of Children and Youth

#### MORE ON EARLY LITERACY

For further information, please see *How Parents Foster Early Literacy*, published by the Canadian Council on Learning as part of its Lessons in Learning series. Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

# EARLY CHILDHOOD LEARNING

## EMOTIONAL AND SOCIAL DEVELOPMENT

Children in their early years have to learn to live with others and to develop relationships. The emotional and social development of young children involves the following:

- *The development of social and emotional bonds of attachment with a significant adult, usually the parent*

These bonds are particularly important during times of distress, sickness or fatigue.<sup>34</sup> Such bonds also teach independence, the capacity to interact with others and to recognize emotional signals.

- *The ability to control emotions*

Emotional and behavioural self-control, which typically begins at the age of two, is associated with an ability to pay attention and concentrate, and to regulate emotional responses in different environments.

- *Integration within peer groups*

From the age of one, a child can interact with other children.<sup>35</sup> Limited at first, these interactions become increasingly important and frequent by the time the child is in school or child care. Peer interactions teach social rules and cues. As children integrate into their peer groups, they learn to suppress aggressive behaviour, understand group social structures, develop leadership skills and form friendships.

Steps in a child's emotional and social development include:

Six months	Infants can communicate with other infants through smiling, touching and babbling.
One year	Most children can participate with their peers in activities related to objects.
Two years	Children can play with other children, imitate others, and change their roles in play.
Three to five years	Pro-social behaviour, or behaviour intended to help or benefit others, and games of simulation are developed and aggressive behaviour diminishes. At four, children can name their best friends and distinguish between peers they like and dislike.

## What do we know about Canada's progress?

To gauge the social and emotional development of Canadian children, the National Longitudinal Survey of Children and Youth (NLSCY) measured physical aggression (bullying, being mean, fighting), indirect aggression (taking revenge, telling secrets, spreading gossip), and personal and social maturity.

As the tables on the following pages reveal, gender differences are common. As toddlers, more boys (16%) than girls (13%) show high levels of physical aggression. The proportion of pre-school children displaying high degrees of indirect aggressiveness decreased from 11% in 1994–1995 to 7% in 2002–2003. Girls, however, were consistently more likely to demonstrate indirect aggressive behaviour.

On the other hand, the proportion of girls (11%) considered to have delayed development in personal and social skills was almost half that for boys (20%).

### TRENDS IN PHYSICAL AGGRESSION

*The NLSCY illustrates three distinct trends in physical aggression as a child matures from toddler age to pre-adolescence. For most children (83%) physical aggression decreased over this period, but one in six children retained their aggressive behaviour.*

*Children with consistently high levels of aggression tended to be boys, to come from low-income families, and to have mothers with little education. The mothers, moreover, were more likely to report more hostile and ineffective parenting strategies.<sup>36</sup>*

<sup>34</sup> Bowlby, J. *Attachment and Loss*, Vol. 1 (New York, NY: Basic Books, 1969).

<sup>35</sup> Boivin, M. "The Origin of Peer Relationship Difficulties in Early Childhood and their Impact on Children's Psychosocial Adjustment and Development," *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development, 2005). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Sept. 15, 2006.

<sup>36</sup> Côté, S.M., et al. "The Development of Physical Aggression from Toddlerhood to Pre-adolescence: A Nation-wide Longitudinal Study of Canadian Children," *Journal of Abnormal Child Psychology*, 34(1) (2006). pp. 71–85.

**Physical aggressiveness among two- and three-year-olds, 2002–2003**

	AVERAGE	HIGH
Both sexes	85.4%	14.6%
Boys	84.0%	16.0%
Girls	87.0%	13.1%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

**Indirect aggressiveness among four- and five-year-olds, 2002–2003**

	AVERAGE	HIGH
Both sexes	92.9%	7.1%
Boys	93.3%	6.7%
Girls	92.5%	7.6%

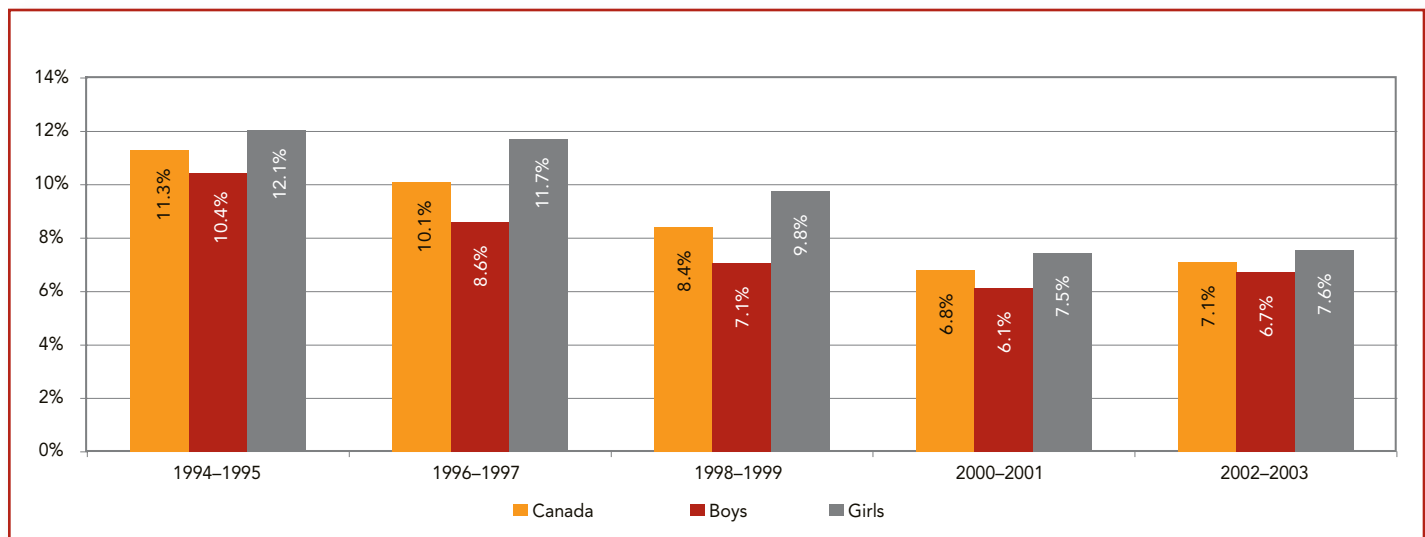
Source: Statistics Canada, National Longitudinal Survey of Children and Youth

**Personal/social development among four- and five-year-olds, 2002–2003**

	DELAYED	AVERAGE OR ABOVE
Both sexes	15.7%	84.3%
Boys	20.3%	79.7%
Girls	10.9%	89.1%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

**Children aged four and five with high levels of indirect aggressiveness, 1994–1995 to 2002–2003**



Source: Statistics Canada, National Longitudinal Survey of Children and Youth

**EARLY CHILDHOOD EDUCATION AND CARE**

The environment in which children are raised has an impact on all developmental areas. This environment includes the home and community, organized educational settings, and child care. Parents and other adults are key to ensuring children grow up in environments that encourage learning and healthy development.

Child care outside the home is a reality for many children. In 2002–2003, more than half (53%) of Canadian children aged six months to five years were in some kind of non-parental child-care arrangement. Recent studies on the impact of child care on children’s development have revealed both advantages and disadvantages, depending on the circumstances.<sup>37</sup> High-quality child care, however, does appear to bring benefits for many children.<sup>38</sup>

Elements of high-quality child care include:

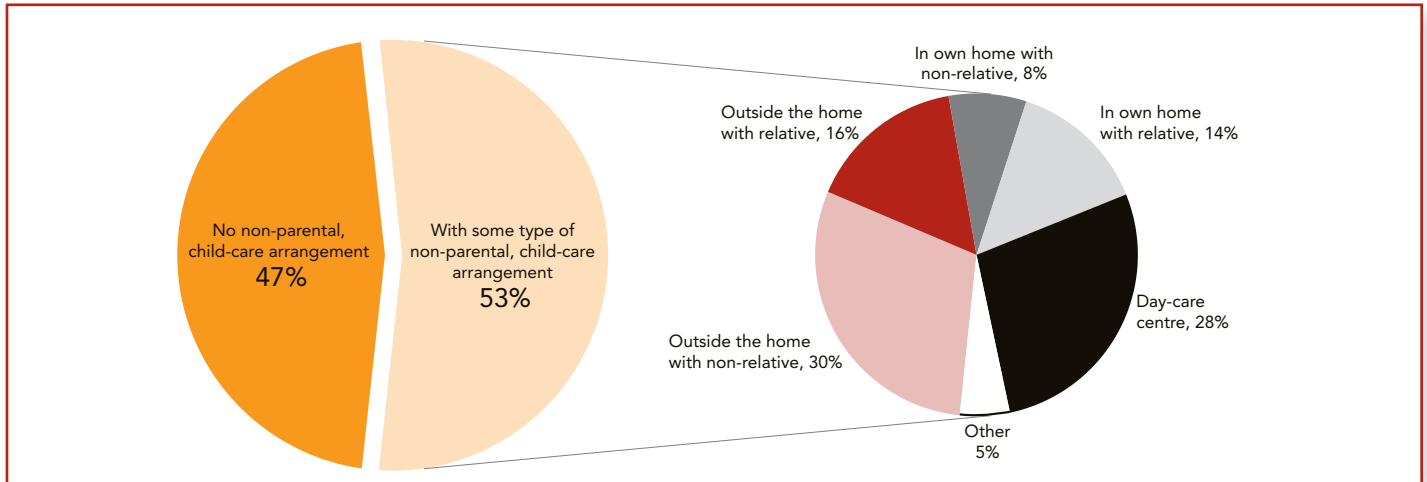
- a high adult–child ratio
- small group sizes
- caregivers with post-secondary training
- a positive relationship between care providers and children
- well defined spaces
- well structured and planned curricula
- significant parental involvement

37 Early Childhood Learning Knowledge Centre. “Why is High-quality Child Care Essential?” *Lessons in Learning* (Ottawa: Canadian Council on Learning, 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed May 31, 2006.

38 McCartney, K. “Current Research on Child Care Effects,” *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development, 2004). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Nov. 2, 2006.

# EARLY CHILDHOOD LEARNING

## Distribution of Canadian children aged six months to five years by child-care arrangement, 2002–2003



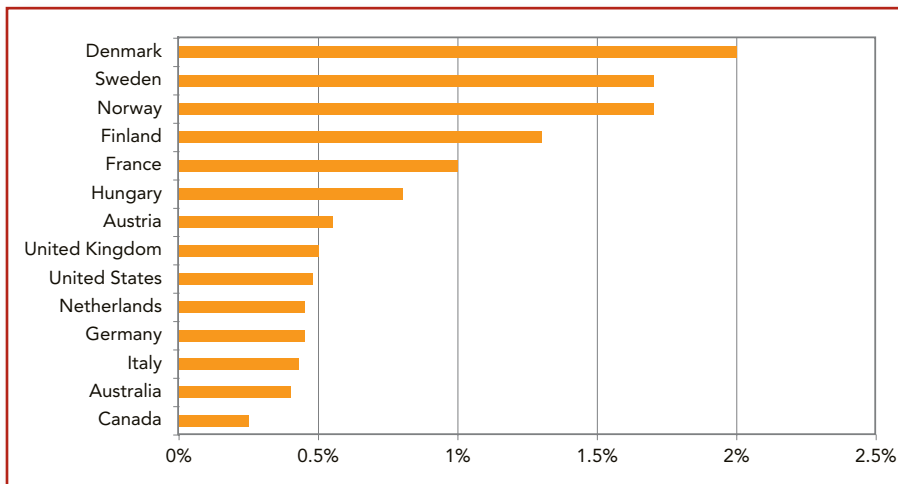
Source: Statistics Canada, National Longitudinal Survey of Children and Youth

### MORE ON QUALITY CHILD CARE

For more information, please see "Why is High-quality Child Care Essential?" published online in CCL's Lessons in Learning series on May 31, 2006. It is available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

As a proportion of Gross Domestic Product (GDP), Canada's public expenditures on early childhood services, including child care, were the lowest among 14 OECD countries that reported this information in 2004. Canada spent 0.25% of GDP on early childhood services for children up to age six. The Scandinavian countries, by contrast, spent between 1% and 2% of GDP.<sup>39</sup>

### Public expenditures on services for children to age six, as a proportion of GDP, 2004



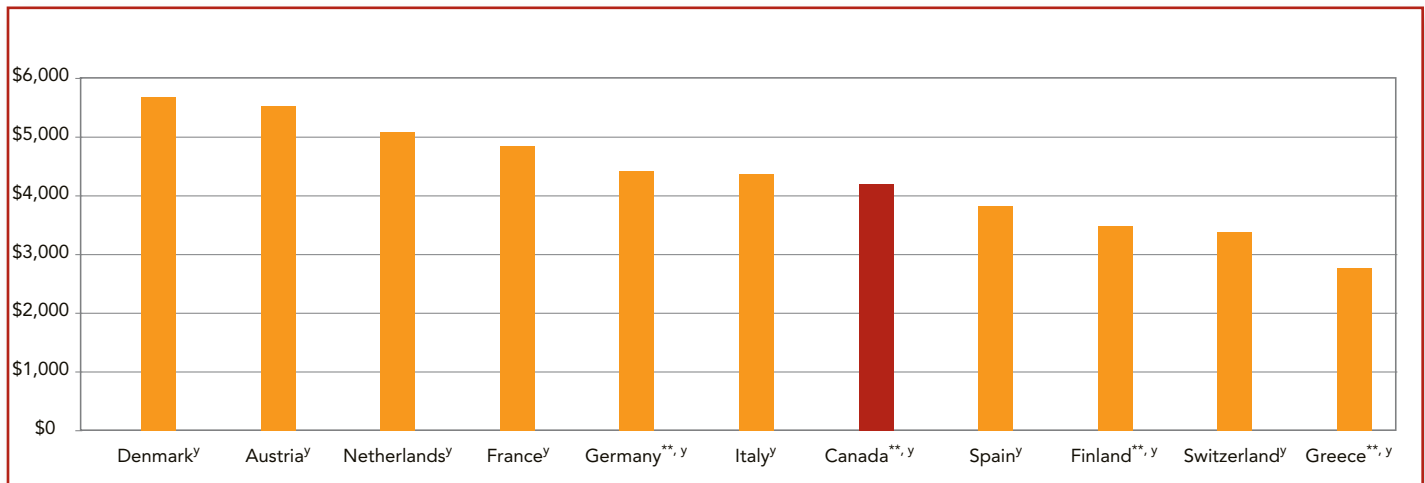
Source: OECD, *Starting Strong II: Early Childhood Education and Care*, 2006

Canada also trails other developed countries in public per-pupil spending on early childhood education, which includes nursery school and kindergarten. Among North American and Western European countries with comparable data, Canada is in a second tier behind Denmark, Austria, Netherlands, France, Germany and Italy. Canada, which spent \$4,194 per child on pre-primary education in 2002, was ahead of Spain, Finland, Switzerland and Greece. (All data are expressed in constant 2003 U.S. dollars.)<sup>40</sup>

<sup>39</sup> OECD, *Starting Strong II: Early Childhood Education and Care* (Paris: OECD, 2006). Available at [www.oecd.org](http://www.oecd.org). Accessed Oct. 12, 2006.

<sup>40</sup> United Nations Educational, Scientific and Cultural Organization. "Strong Foundations: Early Childhood Care and Education," *Education for All Global Monitoring Report 2007* (Paris: UNESCO Publishing, 2006).

### Public per-pupil spending on pre-primary education, 2002–2003



\*\* UNESCO Institute Statistics estimate

<sup>y</sup> Data are for 2002

Note: Amounts expressed in constant 2003 U.S. dollars.

Source: United Nations Educational, Scientific and Cultural Organization. "Strong Foundations: Early Childhood Care and Education," *Education for All Global Monitoring Report 2007* (Paris: UNESCO Publishing, 2006)

#### THE VIEW FROM OUTSIDE

*Canada has significant strengths in early childhood education and care, according to an OECD review.<sup>41</sup> In particular, the review praised policies allowing parents to take paid leave of up to a year, and Quebec's advances in early education and child care. Even so, the study noted that Canada's early childhood policies are fragmented and uneven, and called for a more comprehensive and coherent approach.*

Beyond child care and early childhood education, there are many other organized activities for young children and their families, including play groups, infant stimulation programs, parent-and-child lessons, library story time or other reading programs. A child's participation in such activities can help develop school readiness. In 2002–2003, 43% of Canadian children under six engaged in organized activities.

#### Children under age six participating in organized activities, by province and nationally, 2002–2003

Canada	43.3%
Newfoundland and Labrador	47.6%
Prince Edward Island	43.3%
Nova Scotia	47.4%
New Brunswick	38.1%
Quebec	32.4%
Ontario	43.7%
Manitoba	46.0%
Saskatchewan	43.9%
Alberta	49.5%
British Columbia	54.2%

Source: Statistics Canada, National Longitudinal Survey of Children and Youth

#### PLAY AND LEARN

*Research has demonstrated the importance of unstructured, spontaneous play in early development. Play nourishes every aspect of children's development. It shapes the intellectual, social, physical and emotional skills necessary for success in school and life.*

*For more information, please see "Let the Children Play: Nature's Answer to Early Learning," the Canadian Council on Learning's Lessons in Learning edition of Nov. 8, 2006, available at: [www.ccl-cca.ca](http://www.ccl-cca.ca).*

<sup>41</sup> OECD. *Starting Strong II: Early Childhood Education and Care*, 2006.

## 2.3 The Road Ahead

### WHERE DOES CANADA STAND?

The research leaves no doubt that early childhood learning and development are vital for lifelong learning and life readiness. And yet, many Canadian children are not experiencing optimal early development.

In fact, one in four children is entering Grade 1 with learning or behavioural difficulties that could affect future success in academics and life in general.<sup>42</sup> Although some children are at greater risk of developmental delays, such problems affect children in all demographic groups.

International studies suggest that Canada is trailing other OECD countries in its level of public commitment to early childhood learning. But in order to assess the impact of this finding, it is important to understand the current developmental status of Canadian children, and how this status can be improved through investment.

Toward that end, governments in Canada have been finding new ways to monitor and report on the status of early childhood learning and development. Every year, for instance, Human Resources and Social Development Canada and Health Canada issue a publication entitled *The Well-being of Canada's Young Children: Government of Canada Report*, which describes progress under federal-provincial agreements on early childhood development and care. The document details the status of young children in each province, the state of early learning and child-care programs and services, and annual expenditures on early childhood development.<sup>43</sup>

Significant information on early childhood development has come to light through the creation of new data sources. Examples, which are described in greater detail on pages 21 to 22, include:

- Early Development Instrument
- Linked provincial databases in Manitoba
- The Early Years Evaluation
- The Quebec Longitudinal Study of Child Development
- Understanding the Early Years

### WHAT DON'T WE KNOW?

As illuminating as they are, these new data sources have so far provided only a fragmented picture. There is significant room to expand these types of initiatives to further enrich what we know about early learning across all of Canada.

At a pan-Canadian level, the information on early childhood learning that is currently collected does not tell us everything we need to know either. Moreover, we lack the kind of data that would allow us to compare our domestic situation with the situation of children living abroad.

In short, as the OECD has made clear,<sup>44</sup> there is significant scope to expand our research and deepen our understanding of early learning across Canada.

### WHAT WILL CCL DO?

Early childhood learning is one of five priorities for the Canadian Council on Learning. CCL has established the Early Childhood Learning Knowledge Centre to monitor and report on the state of early learning in Canada. The knowledge centre is a consortium of organizations led by the Centre of Excellence for Early Childhood Development at the Université de Montréal. In early 2007, CCL plans to publish the first in a series of detailed reports on early childhood learning.

Currently, many indicators of early learning are assessed just before school age. The Early Childhood Learning Knowledge Centre intends to promote the use of additional indicators that give us useful information on child development, from before birth to the age of four. We will also highlight indicators related to the environment in which children are growing up, including the resources and services that are available to families.

CCL is also making changes to its Composite Learning Index, in order to include early childhood development.

<sup>42</sup> Willms, D. *Vulnerable Children* (Edmonton: University of Alberta Press, 2002). Also, Kershaw, P., et al. *The British Columbia Atlas of Child Development, First edition* (Human Early Learning Partnership and Western Geographical Press, 2005).

<sup>43</sup> The Federal/Provincial/Territorial Communiqué on Early Childhood Development is available at [www.ecd-elcc.ca/en/ecd/ecd\\_home.shtml](http://www.ecd-elcc.ca/en/ecd/ecd_home.shtml).

<sup>44</sup> OECD. *Early Childhood Education and Care Policy: Canada Country Note* (Paris: OECD Directorate for Education). Available at [www.sdc.gc.ca/en/cs/sp/sdc/socpol/publications/reports/2004-002619/Country.pdf](http://www.sdc.gc.ca/en/cs/sp/sdc/socpol/publications/reports/2004-002619/Country.pdf). Accessed Sept. 26, 2006.



## THE EARLY DEVELOPMENT INSTRUMENT

The Early Development Instrument (EDI) was created in 1997 to assess child development and school readiness at kindergarten age. It was designed by the Offord Centre for Child Studies (formerly the Canadian Centre for Studies of Children at Risk) at McMaster University in Hamilton, Ont., in partnership with the Founders' Network and the Early Years Action Group in North York, Ont.

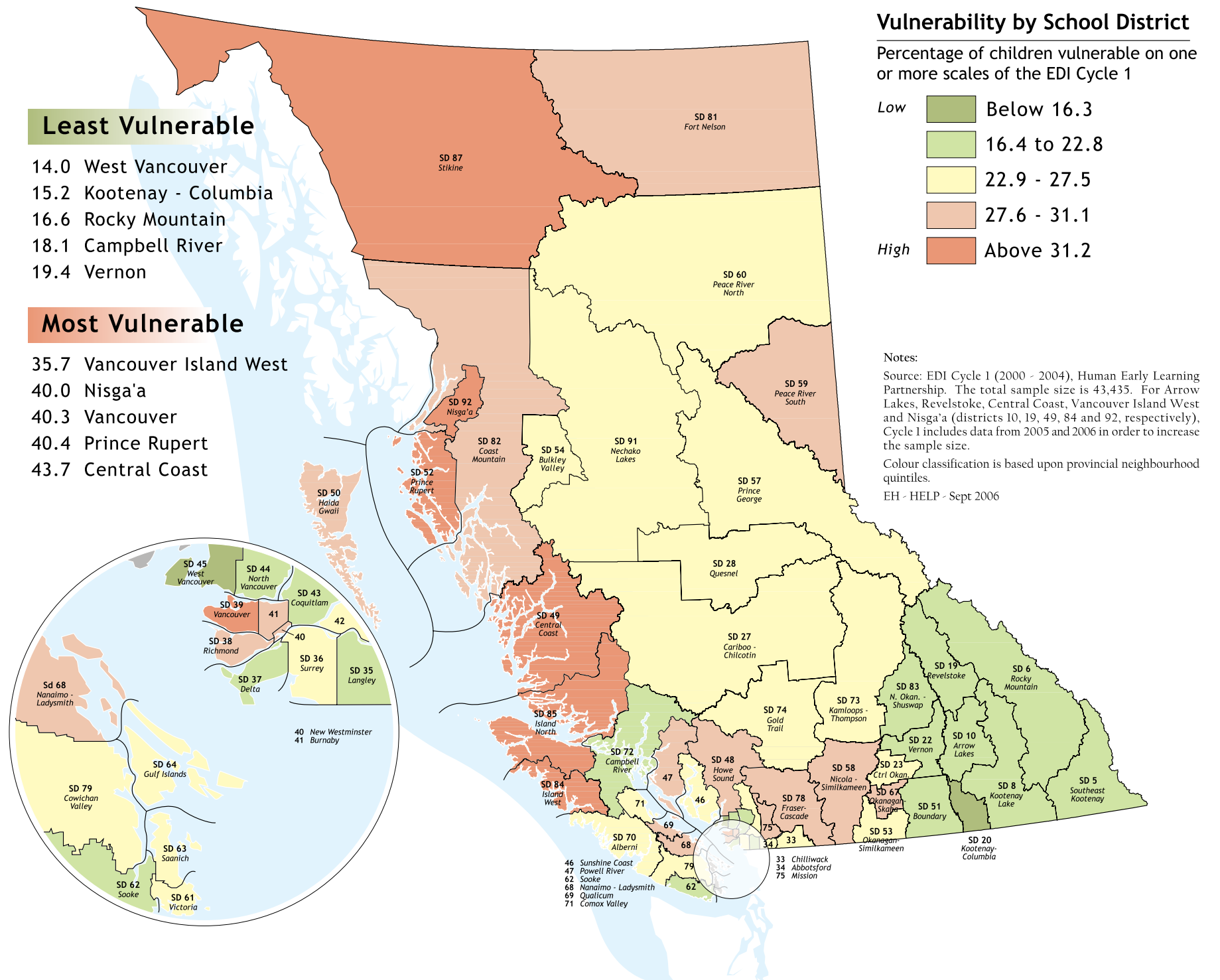
The EDI serves as an outcome measure for early life and as a baseline measure for the school years. Through a checklist filled out by kindergarten teachers, the instrument gauges physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication skills and general knowledge.

Each category contains a *vulnerability threshold*. Children who score below the threshold are said to be limited or vulnerable in that particular domain of their development. Communities are informed of the proportion of vulnerable children within their geographic boundaries.

The EDI gathers data on about half of all five-year-olds in Canada. It is used in British Columbia, Manitoba, Ontario and other regions of the country.

In British Columbia, for instance, the Human Early Learning Partnership (HELP) used the EDI to identify school districts where children were most in need of interventions. (See map.)

For more information on the EDI, please see: [www.offordcentre.com/readiness/](http://www.offordcentre.com/readiness/)



THE EARLY YEARS EVALUATION

The Early Years Evaluation (EYE) is designed to help educators assess the skills of children aged four to six, who are making the transition to school.<sup>45</sup> Five aspects of early child development and school-readiness are evaluated:

- awareness of self and the environment (general knowledge)
- social skills, behaviour and approaches to learning
- cognitive skills
- language and communication
- physical development

The evaluation consists of a 10-minute assessment by a teacher and a direct assessment completed by the child over 20 to 30 minutes. KSI Research International Inc. has conducted three pilot studies to assess the reliability of EYE.

More information is available at: [www.ksiresearch.com/eye/](http://www.ksiresearch.com/eye/)

THE QUEBEC LONGITUDINAL STUDY OF CHILD DEVELOPMENT

The Quebec Longitudinal Study of Child Development (QLSCD)<sup>46</sup> aims to identify factors that affect the social development and academic performance of young people in the province.

The first round of the QLSCD began in 1998 with a cohort of 2,120 children born in 1997–1998. The children were surveyed annually from the age of five months to four years. A second phase of the study is now underway and will continue until 2011.

For more information, please see: [www.jesuisjeserai.stat.gouv.qc.ca/etude\\_an.htm](http://www.jesuisjeserai.stat.gouv.qc.ca/etude_an.htm)

UNDERSTANDING THE EARLY YEARS

Understanding the Early Years (UEY) is a research initiative funded by Human Resources and Social Development Canada. Under UEY, participating communities receive information on the school readiness of their kindergarten children, family and community factors that influence children’s development, and the availability of local resources for children and families.

Launched in 1999 in North York, Ont., UEY was refined as a pilot project in 12 communities. It has been a pan-Canadian program since 2004, with up to 100 communities receiving support between 2005 and 2008.

More information is available at: [www.sdc.gc.ca/en/hip/sd/300\\_UEYInfo.shtml](http://www.sdc.gc.ca/en/hip/sd/300_UEYInfo.shtml)

LINKED PROVINCIAL DATABASES IN MANITOBA

The Manitoba Centre for Health Policy (MCHP) at the University of Manitoba uses anonymous administrative databases that can be linked together for specific research projects ([www.umanitoba.ca/centres/mchp/data.htm](http://www.umanitoba.ca/centres/mchp/data.htm)).

While the link between socio-economic status (SES) and school performance is generally well established, the creative use of provincial databases allowed the MCHP to produce even more telling statistics for a project known as the Child Health Atlas 2004.

The top graph (right) illustrates what schools see when they review Education Ministry data on the performance of children taking the standardized Grade 3 language arts test. Ninety-four percent of students living in high-SES areas passed the test, compared to 83% of those from low-SES areas.

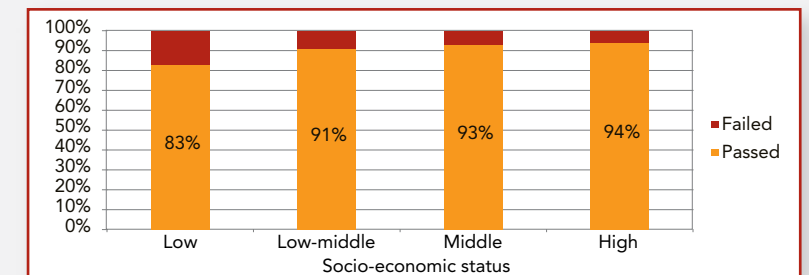
However, the bottom graph (right) tells a different story. In this case, researchers included more comprehensive population-registry information. When all children who should have been in Grade 3 in Winnipeg in 1998–1999 were included in the expanded dataset, only 50% of the children from low-SES

families passed the test. Children from the lowest SES group were more likely to have failed the test, been absent or exempted, or had already been held back at least one grade and were therefore no longer with their Grade 3 cohort.

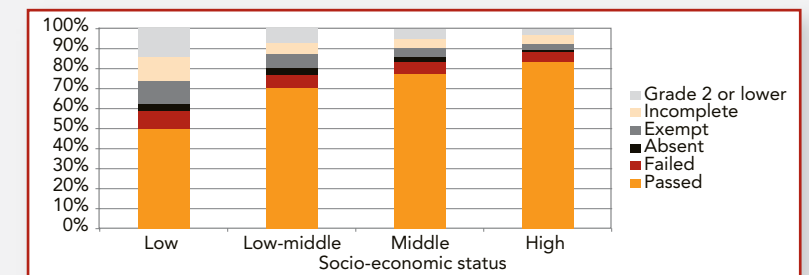
More details on this project may be found at: [www.umanitoba.ca/centres/mchp/reports/child\\_inequalities/](http://www.umanitoba.ca/centres/mchp/reports/child_inequalities/)

Performance of Winnipeg pupils on standardized Grade 3 language arts test, by socio-economic status, 1998–1999

Pass/fail rate of those who wrote the test



Figures with all eight-year-olds who should have written the test



<sup>45</sup> Information presented here on the EYE is largely based on Willms, J. D., and J. Beswick. *The Early Years Evaluation—Teacher Assessment* (KSI Research International Inc.) Available at [www.ksiresearch.com/eye/](http://www.ksiresearch.com/eye/). Accessed Sept. 29, 2006.

<sup>46</sup> The Institut de la statistique de Québec. *Quebec Longitudinal Study of Child Development* (Quebec). Available at [www.jesuisjeserai.stat.gouv.qc.ca/](http://www.jesuisjeserai.stat.gouv.qc.ca/).

# LEARNING IN SCHOOL

## 3.1 Introduction

Schools have always played a pivotal role in the lives of children, families and communities. They are often the geographical centre and the social anchor of a neighbourhood—a place to gather, to play and to learn.

From kindergarten through high school, Canadian schools equip children with a tremendous range of skills, from the most basic to the very advanced. By exposing young people to new experiences, different types of people and the joy of discovery, these first 13 or 14 years of formal education help shape the child and future.

Schools help to prepare children for the rest of their lives. Schools teach skills and knowledge, as well as the process for acquiring them. While working to instil a love of learning, schools can also teach responsibility, values and good citizenship.

School is also a place for children to feel safe and secure, protected from bullies and other menaces. It is a place to learn about good health and wise lifestyle choices, and to practise the social skills that bring individuals together into communities.

Yet for all the potentially positive attributes of schooling, high-school graduation is no longer enough for many young Canadians. The workplaces of today demand workers with advanced training, skills and credentials. There are already significant skills shortages in Canada, made worse by an increasingly competitive global market for highly trained people.

Canada's primary and secondary education systems can no longer fulfil those demands; the challenge must be shared by post-secondary and other training institutions, ideally in conjunction with employers, labour and the broader community.

This chapter examines the state of learning in Canada's elementary, secondary and post-secondary schools—what students are learning, how they're learning it, whether schools are preparing young people to succeed in the Canadian workplace, and how we compare with other countries.

## 3.2 Indicators of Learning in School

In order to gauge the performance of Canada's school-based learning system, we will examine the available research related to five main indicators:

- student skills
- citizenship education, including political and historical knowledge, as well as political participation by young people
- student health and safety
- high-school dropout rates
- enrolment in post-secondary learning institutions, including registered apprenticeships

### STUDENT SKILLS

During their elementary and secondary school years, Canadian youth must develop basic skills in reading, mathematics, problem solving and science.

Literacy and related skills are critical for further education and future financial and social success.<sup>1</sup> They give young people the capacity for innovative thinking and the adaptability required in today's knowledge-based economy. People with high levels of literacy are more likely to be engaged in society, which benefits them as well as their communities.

People with low literacy skills, by contrast, tend to have more trouble finding a job, will usually earn less income, and are less likely to receive employer-funded training to enhance their skills later in life.

*For a more detailed discussion of Canada's literacy skills and challenges, please refer to the special feature on literacy in this publication, entitled Learning and Literacy: Canada's Challenges.*

### What do we know about Canada's progress?

The reading, math, science and problem-solving skills of 15-year-olds are assessed through the Programme for International Student Assessment (PISA). The results can be compared across Canada, and against the performance of students in other countries.

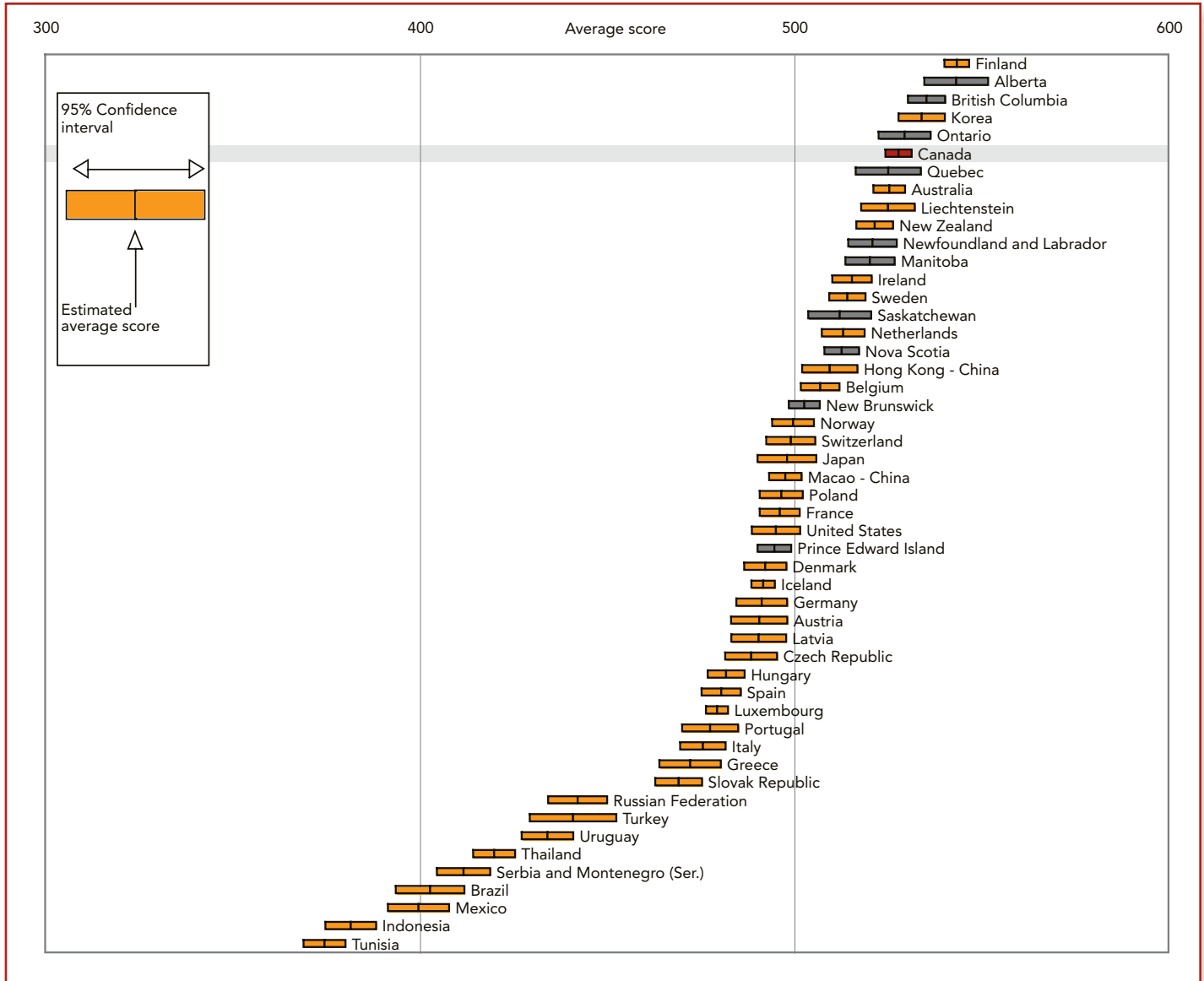
Canada was significantly above the OECD average in all four skill domains in 2003. While all Canadian provinces performed at or above the OECD averages, significant differences were apparent in the results of individual provinces.

Canada performed particularly well in reading skills, placing—along with Australia, Korea, Hong Kong, New Zealand and Liechtenstein—just behind first-place Finland.

In mathematics, Hong Kong-China and Finland performed significantly better than Canada. Canada's performance was at roughly the same level as Korea, Netherlands, Liechtenstein, Japan, Belgium, Macao-China and Switzerland.

In problem solving and science, the skills of Canadian students were weaker than in reading and mathematics. Canadians were outperformed by youth in four other countries.

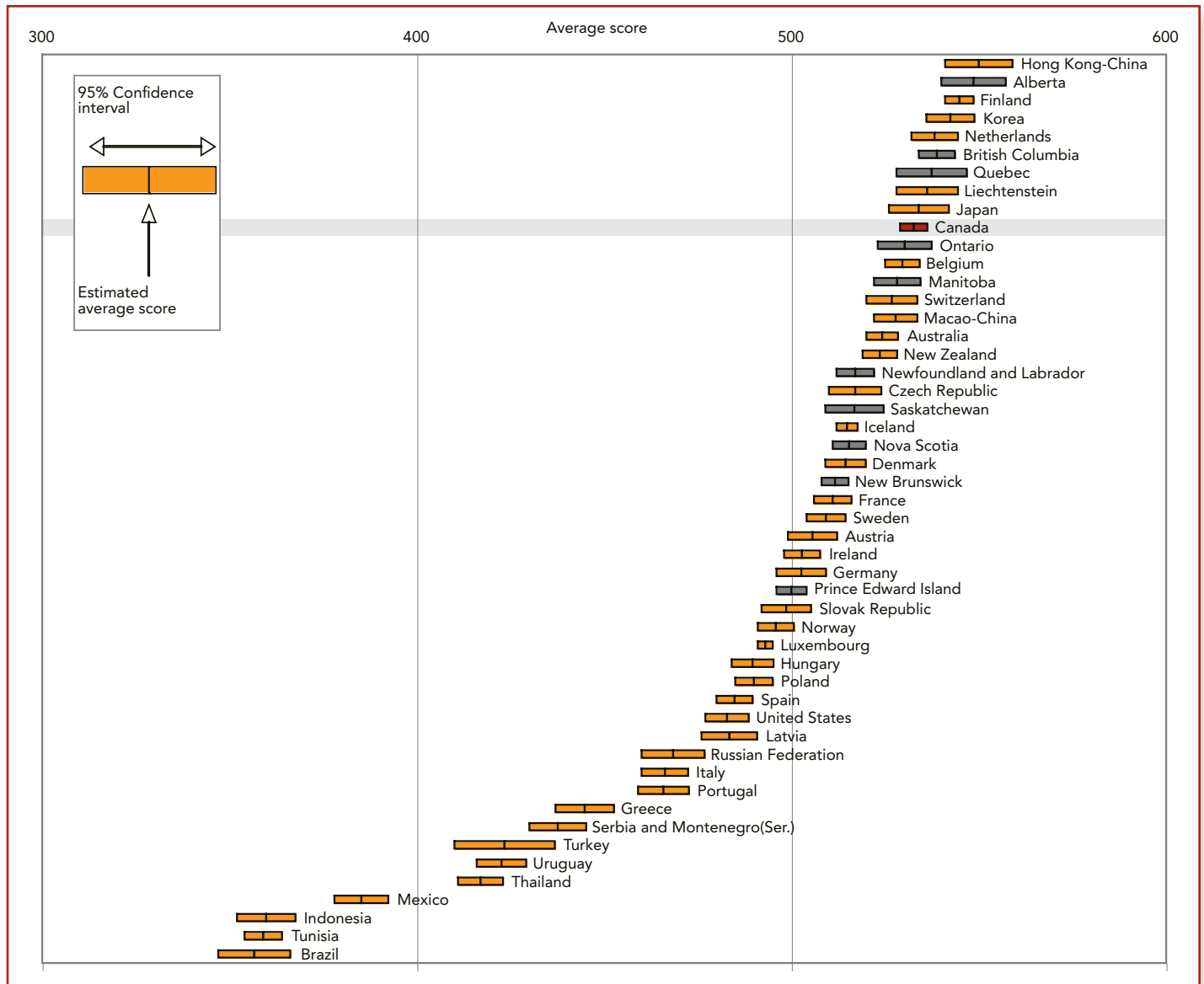
Reading skills of 15-year-olds, international comparisons, 2003



Source: Organisation for Economic Co-operation and Development, Programme for International Student Assessment, 2003

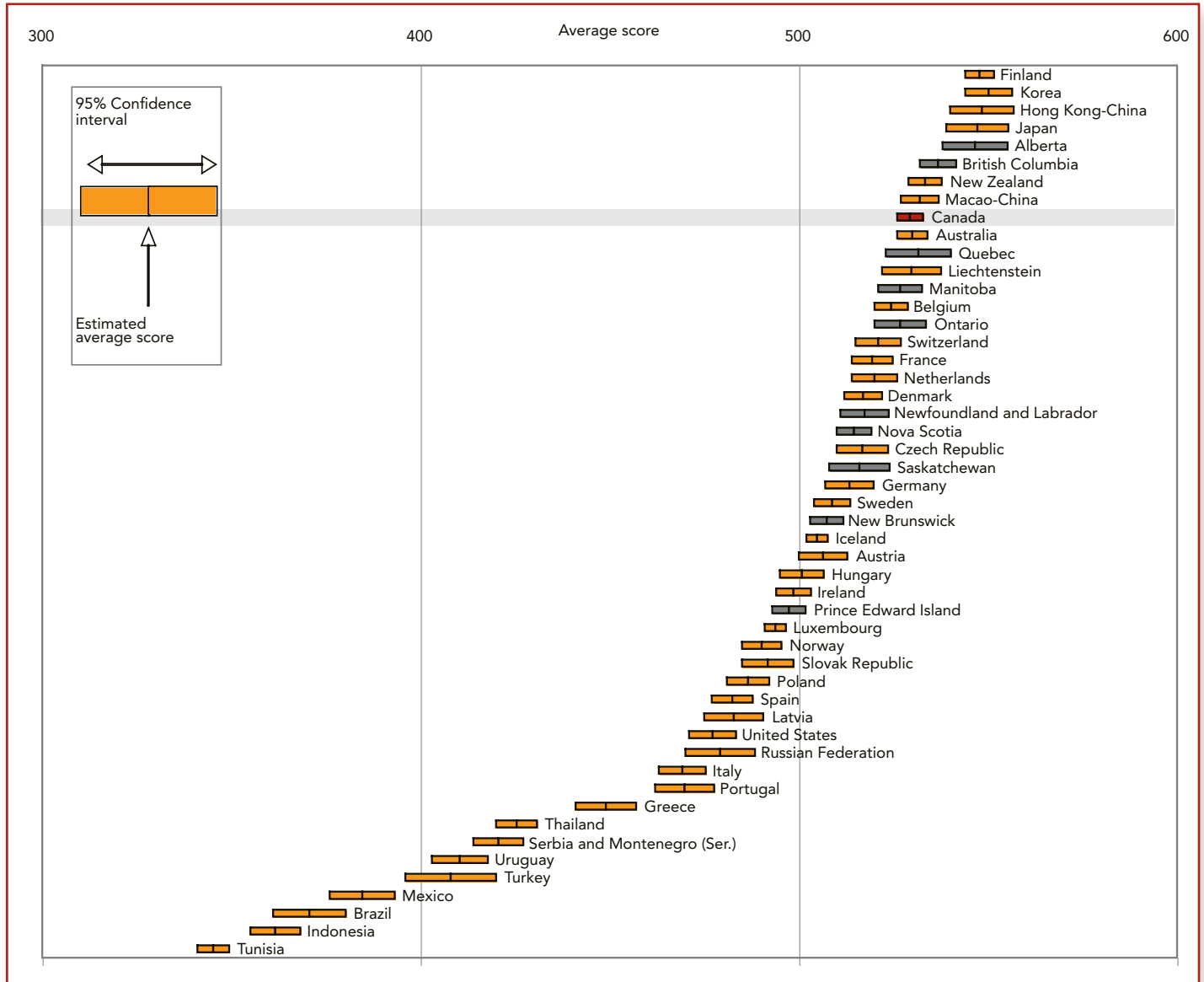
# LEARNING IN SCHOOL

## Mathematics skills of 15-year-olds, international comparisons, 2003



Source: Organisation for Economic Co-operation and Development, Programme for International Student Assessment, 2003

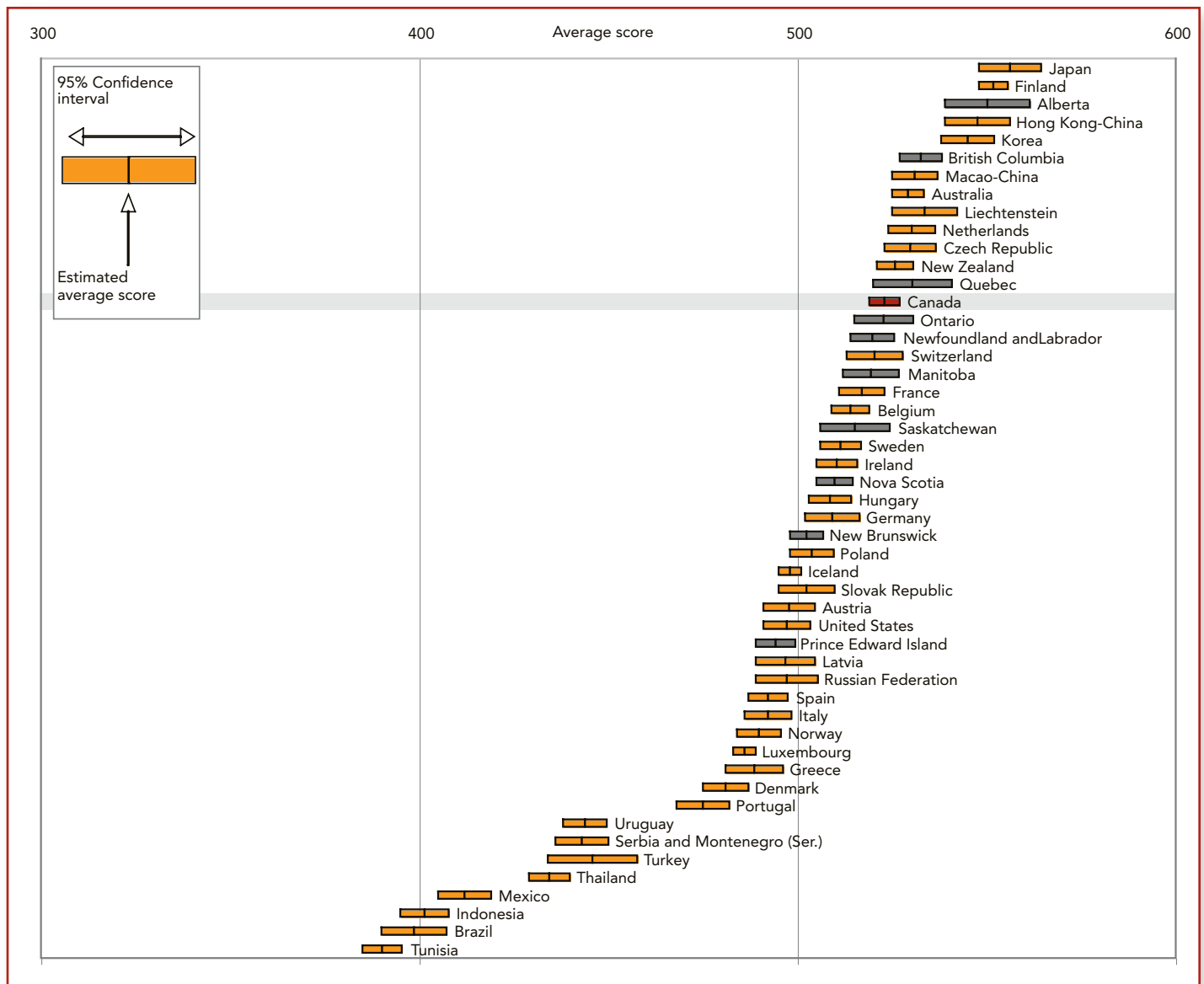
Problem-solving skills of 15-year-olds, international comparisons, 2003



Source: Organisation for Economic Co-operation and Development, Programme for International Student Assessment, 2003

# LEARNING IN SCHOOL

## Science skills of 15-year-olds, international comparisons, 2003



Source: Organisation for Economic Co-operation and Development, Programme for International Student Assessment, 2003

When the 2003 results are compared to a similar survey conducted in 2000, no significant change can be detected in the reading performance of Canadian students. Science scores, however, dropped slightly over this three-year interval. Changes in the assessment tools make it impossible to compare 2000 and 2003 results in mathematics. Problem-solving skills were not assessed at all in 2000.<sup>2</sup>

### Demographic differences

Canadian girls outperformed boys in reading, while boys scored higher in mathematics. The difference in the mathematics scores was small—an average of 11 points, or one-sixth of a proficiency level. The difference in the reading levels was more significant, with girls scoring an average of 32 points higher than boys.

<sup>2</sup> Bussière, P., F. Cartwright and T. Knighton. *Measuring Up: Canadian Results of the OECD PISA Study—The Performance of Canada's Youth in Mathematics, Reading, Science and Problem Solving* (Ottawa: Minister of Industry, 2004). Available at [www.pisa.gc.ca/81-590-xie2004001.pdf](http://www.pisa.gc.ca/81-590-xie2004001.pdf). Accessed Nov. 20, 2006.



In science, boys performed only slightly better than girls. There was no appreciable difference between genders in problem-solving skills.<sup>3</sup>

In comparison to other OECD countries, family income in Canada was found to have a below-average impact on student skills.<sup>4</sup> In reading and science, students in French-language schools in all provinces outside Quebec performed worse on average than students in English-language schools.

## CITIZENSHIP EDUCATION

Schools have an important responsibility to teach Canadian youth about their country—its history, politics and place in the world. Indeed, universal education was first established in Canada in order to foster an informed citizenry with a distinct identity.<sup>5</sup>

An understanding of Canada's history and politics is important to young people on many levels.

For the individual, it develops civic literacy, the knowledge required to participate effectively in a democracy. Civic literacy helps young people develop an awareness of, and interest in, issues facing Canada.

CCL researchers, using data from the 2004 Canadian Election Survey, found that Canadians who took a civics course in high school were more likely to say they would vote. This trend was apparent even among respondents who admitted to little interest in politics.<sup>6</sup>

Society also benefits from an informed and engaged citizenry. An understanding of history and politics helps young people grasp their rights and responsibilities as members of a democracy. It also opens their eyes to Canada's distinct place and role in the global community.

History and civics education in the schools is especially vital at a time of increased immigration because it draws people together around a shared knowledge of their country.

### MORE ABOUT VOTING TRENDS

Further information on citizenship education can be found in CCL's *Lessons in Learning* article entitled "Falling voter turnout: Is it linked to diminished civics education?" It is available on the CCL website at [www.ccl-cca.ca](http://www.ccl-cca.ca).

## What do we know about Canada's progress?

Research indicates that citizenship education has declined in Canadian schools in recent decades in favour of education geared to Canada's economic goals.<sup>7</sup> The trend, however, has not gone unnoticed. While pan-Canadian data on Canadians' knowledge of their history and politics are limited, the importance of improving and broadening citizenship education has been widely discussed in recent years. Across Canada, ministries of education are developing new citizenship curricula. The Historica Foundation and the Dominion Institute have also responded to the perceived need with online information on Canadian history and politics.

To take a closer look at Canada's performance in citizenship education, we examined data on the political and historical knowledge of young Canadians, as well as their level of political participation.

### Political knowledge

Although data are limited, the research suggests that Canadian students are not particularly well informed about Canadian politics.

A comparison of surveys administered in 1956, 1984 and 2000 reveals a growing gap in political knowledge between younger and older Canadians. While more Canadians aged 50 or older were politically knowledgeable in 2000 than in 1956, Canadians aged 21 to 29 were actually *less* likely to be politically aware in 2000 than in the past.

The decline in knowledge among young Canadians is of concern in light of the dramatic increase in the proportion of students completing high school and post-secondary education over this period.<sup>8</sup>

3 Ibid.

4 Ibid.

5 See Osbourne, K. "Public schooling and citizenship in Canada," *Canadian Ethnic Studies*, Vol. 32 No. 1 (Calgary: Canadian Ethnic Studies Association, 2000). Also, McKenzie, Helen. *Citizenship Education in Canada* (Ottawa: Government of Canada's Depository Services Program, 1993). Available at <http://dsp-psd.communication.gc.ca>. Accessed Sept. 13, 2006.

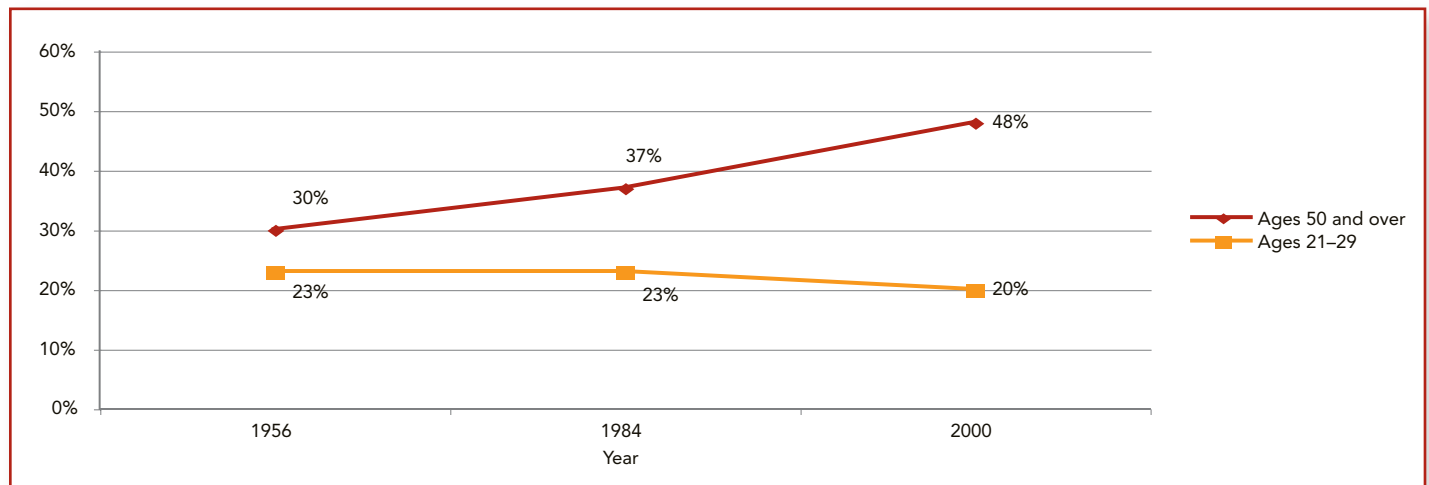
6 Canadian Council on Learning. "Falling voter turnout: Is it linked to diminished civics education?" *Lessons in Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Nov. 16, 2006.

7 Osbourne, K. "Public schooling and citizenship in Canada," *Canadian Ethnic Studies*, Vol. 32 No. 1 (Calgary: Canadian Ethnic Studies Association, 2000).

8 Howe, Paul. "Where have all the voters gone?" *Inroads: The Canadian Journal of Opinion*, No. 12 (Winter/Spring 2003). pp. 74–83.

# LEARNING IN SCHOOL

## Proportion of Canadians with a high level of political knowledge, by age, 1956, 1984 and 2000



Source: Adapted from Howe, Paul. "Where have all the voters gone?" *Inroads: The Canadian Journal of Opinion*, No. 12 (Winter/Spring 2003). pp. 74-83.

### Historical knowledge

Once again, data are very limited, but they suggest that Canadian students' knowledge of Canadian history seems to be lacking.

The Dominion Institute undertakes a regular telephone survey to quiz Canadians on their ability to answer questions on Canadian history. The 2005 quiz, for instance, focussed on the economic history of the country.<sup>9</sup> On average, respondents could answer only eight of 20 questions correctly. Among respondents aged 18 to 34, the average score was even lower—7.5 of 20 questions were answered correctly.

Despite these poor results, Canadians appear to acknowledge the importance of history and want to learn more. In conjunction with the 2005 Canada Day quiz, 94% of respondents said that learning history is important and 84% said they personally wanted to learn more about Canada's history.<sup>10</sup>

Americans appear to know their history better than Canadians. A 2001 research project asked Canadians and Americans equivalent questions in history and civics.<sup>11</sup> Sixty-three per cent of the American adults in the study sample could correctly answer five of the 10 questions, compared to 39% of the Canadians. For instance, while most Americans knew George Washington was the first

American president, only about half of Canadians could correctly name Sir John A. Macdonald as Canada's first prime minister.

### Political participation

Young Canadian adults are far less likely than older Canadians to vote. They are also less likely to vote than were young people in previous generations.<sup>12</sup>

These findings may not be entirely surprising, given the seemingly declining level of knowledge about civics and history among young Canadians.

Declining voting patterns among younger adults may have negative implications for the democratic process. Overall voter turnout in Canada is falling across all ages, and is already among the lowest in the industrialized world.<sup>13</sup> Despite a small increase in voting patterns in the 2006 federal election, voter participation since the 1950s has been on a steady downward trend.

But while voting patterns are declining, some evidence suggests that younger Canadians are more likely than older Canadians to participate in other political activities. Statistics Canada's 2003 General Social Survey, for instance, reveals that youth are more likely to engage in at least one form of political activity other than voting, such as taking part in a boycott or protest march.<sup>14</sup>

9 Dominion Institute and TD Bank Financial Group. *2005 Annual Canada Day History Quiz*, Conducted by the Innovative Research Group (Toronto: 2005). Available at [www.dominion.ca](http://www.dominion.ca). Accessed Nov. 16, 2006.

10 Dominion Institute. *2005 Annual Canada Day History Quiz*. [www.dominion.ca](http://www.dominion.ca).

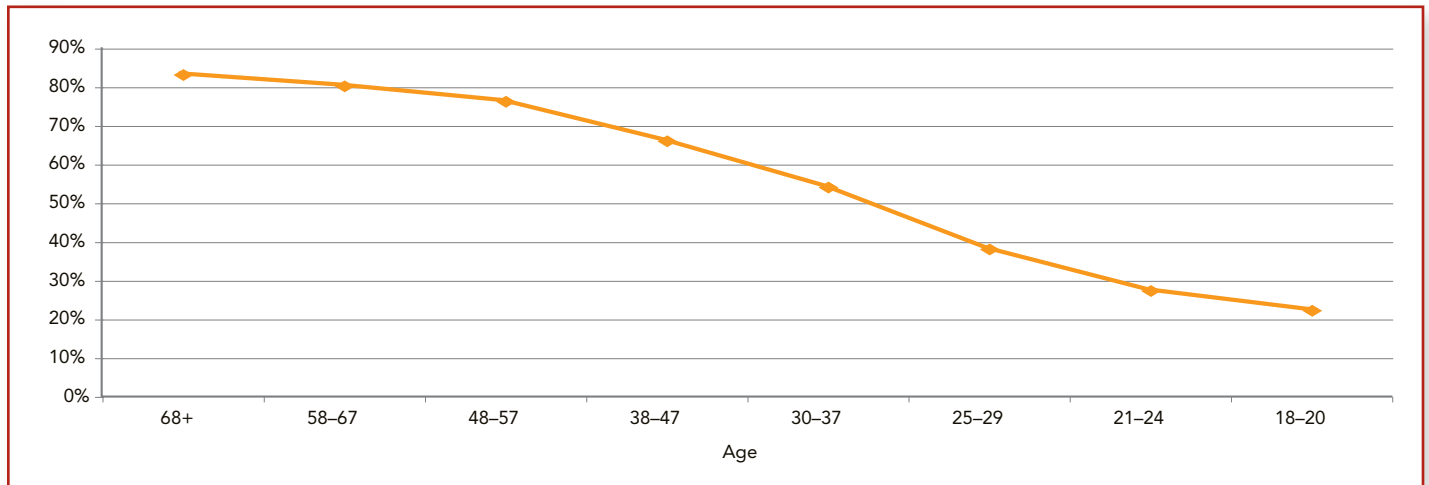
11 Dominion Institute and Ipsos-Reid. *5th Annual Canada Day History Quiz*, News release (Toronto: 2005). Available at [www.ipsos-na.com/news/pressrelease.cfm?id=1255](http://www.ipsos-na.com/news/pressrelease.cfm?id=1255). Accessed Nov. 16, 2006.

12 Canadian Council on Learning. "Falling voter turnout: Is it linked to diminished civics education?" *Lessons in Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

13 Centre for Research and Information on Canada. *Voter Participation in Canada: Is Canadian Democracy in Crisis?* Paper #3 (Ottawa: 2001). Available at [www.cric.ca/](http://www.cric.ca/). Accessed Nov. 20, 2006.

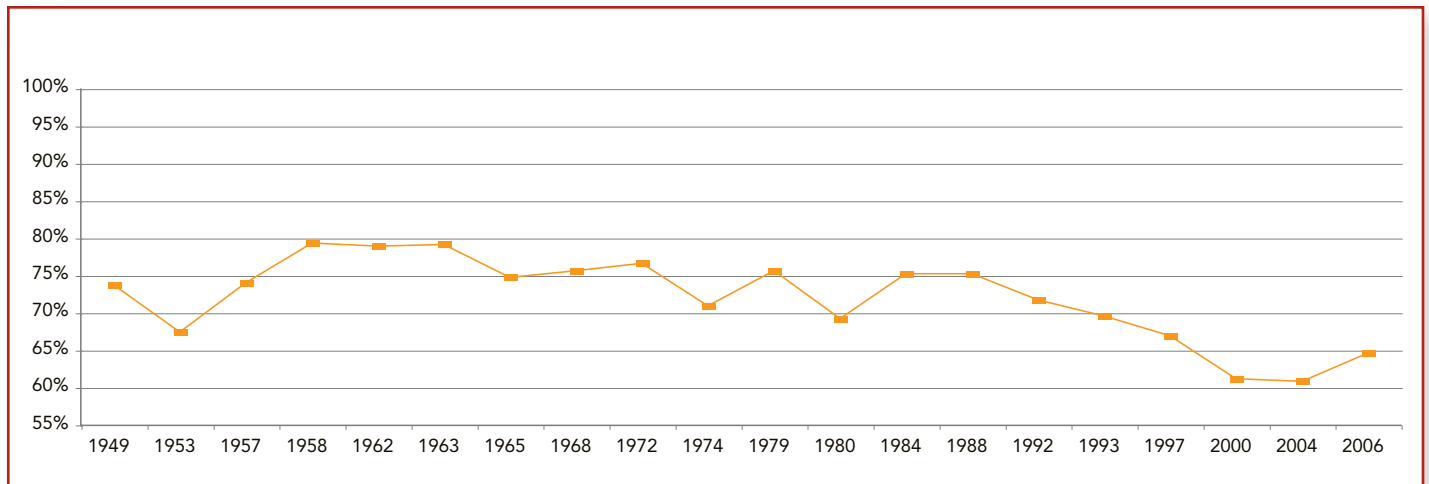
14 Milan, Anne. "Willing to participate: Political engagement of Young Adults," *Canadian Social Trends* (Ottawa: Statistics Canada, Winter 2005). Catalogue No. 11-008. Available at <http://www.statcan.ca/>. Accessed Nov. 20, 2006.

**Proportion of eligible voters who voted in the 2000 federal election, by age**



Source: Pammett, J. and L. LeDuc. *Explaining the Turnout Decline in Canadian Federal Elections: A New Survey of Non-voters* (Ottawa: Elections Canada, 2003)

**Proportion of eligible Canadian voters who voted in federal elections, 1949-2006**



Source: Elections Canada. *Voter Turnout at Federal Elections and Referendums, 1867-2004*, plus the figure for 2006, available at [www.elections.ca](http://www.elections.ca)

# LEARNING IN SCHOOL

## HEALTHY SCHOOLS

*Schools could do more than perhaps any other single institution in society to help young people, and the adults they become, to live healthier, longer, more satisfying and more productive lives.*

—Carnegie Council on Adolescent Development, 1989

Schools are about more than learning. They are also a place for children to play, eat, socialize and participate in extra-curricular activities.

Because they are the primary gathering place for youngsters, schools are also convenient settings for the delivery of health and social services.<sup>15</sup> In fact, officials have long used schools for immunization programs, vision screening and the distribution of healthy-lifestyles information.<sup>16</sup>

Schools are also a place for children to learn about and practise positive behaviours, such as physical activity and healthy eating.<sup>17</sup> This is good for the school, because healthy children are better learners.<sup>18,19</sup> It is also good for the child, because healthy patterns of living that are developed early in life are more likely to be maintained in adulthood. This is especially important at a time when obesity and inactivity are growing problems in Canada.

School safety is another vital element of mental and physical health among students. Children learn better when they feel safe at school. They also tend to enjoy better overall health and are less likely to engage in risky behaviours, such as using marijuana, alcohol or tobacco.<sup>20</sup>

To enhance the safety of the learning environment, schools are trying to combat bullying. It is widely understood that bullying can create a cycle of abuse. Childhood bullies tend to grow into adult bullies. Parents who were bullied tend to have children who, in turn, become victims of bullies. There are costs to society in dealing with victims and bullies.<sup>21</sup>

Getting children engaged in their schools fosters health and learning as well. Students who participate in the life of their schools tend to learn more and are more willing to pursue knowledge.<sup>22</sup> Youth who are highly engaged in school are also healthier, less likely to participate in risky behaviours and more likely to want to progress to post-secondary education.<sup>23</sup>

There is increasing evidence of the benefits of a holistic approach to health and learning in which families, communities, educators and health professionals work together to create an environment that supports the physical and mental well-being of young people.

This section examines the state of student health and well-being, and students' sense of safety and engagement at school.

*An effective school health programme can be one of the most cost effective investments a nation can make to simultaneously improve education and health.*

—World Health Organization<sup>24</sup>

15 Rootman, Irving. *What we Know and Don't Know About School Health*. Presentation, School Health Workshop held in Vancouver, Feb. 13–14, 2004 (School Health Research Network, 2004) Available at [www.schoolhealthresearch.org](http://www.schoolhealthresearch.org). Accessed Oct. 2, 2006.

16 Miller, Gord. *Ecological Approach to School Health Promotion Review of Literature*. For CIHR-sponsored project *The Multifaceted Potential of the School as an Environment for Health Promotion* (Ottawa: School Health Research Network, 2003). Available at: <http://www.schoolhealthresearch.org/pdf>. Accessed Oct. 1, 2006.

17 McCreary Centre Society. *Healthy Youth Development Highlights from the 2003 Adolescent Health Survey III* (Vancouver: 2004).

18 Parcel G. S. et al. "School promotion of healthful diet and physical activity: Impact on learning outcomes and self-reported behavior," *Health Education Quarterly*, 16 (2) (Summer 1989). pp. 181–199.

19 McKay, Heather. *Action Schools! B.C. Phase I (Pilot) Evaluation Report and Recommendations* (Victoria, B.C.: Ministry of Health Services, Nov. 2004). Available at [www.healthservices.gov.bc.ca/cpa/publications](http://www.healthservices.gov.bc.ca/cpa/publications). Accessed Nov. 21, 2006.

20 McCreary Centre Society. *Healthy Youth Development Highlights from the 2003 Adolescent Health Survey III*. (Vancouver: 2004).

21 World Health Organization. "Young People's Health in Context: Health Behaviour in School-aged Children Study: International Report from the 2001–2002 Survey," *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004). p.133.

22 Bussière, *Measuring Up*, [www.pisa.gc.ca](http://www.pisa.gc.ca).

23 Canadian Institute for Health Information. *Improving the Health of Young Canadians* (Ottawa: 2005). Available at <http://secure.cihi.ca>. Accessed Nov. 16, 2006.

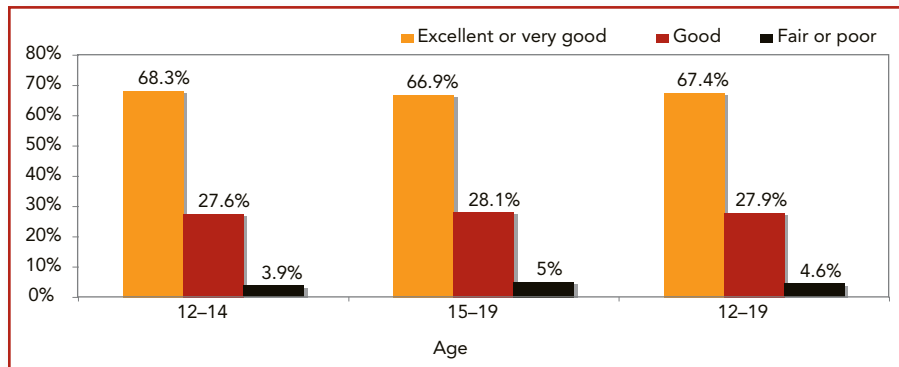
24 World Health Organization website. Available at [www.who.int/school\\_youth\\_health/en/](http://www.who.int/school_youth_health/en/). Accessed Nov. 27, 2006.

## What do we know about Canada's progress?

### General health

Most Canadian adolescents consider themselves healthy. In 2005, two-thirds of 12- to 19-year-olds rated their health as excellent or very good. Another 28% said their health was good. Very few saw themselves as unhealthy.

### Self-perceived health status of Canadian youth, by age group, 2005



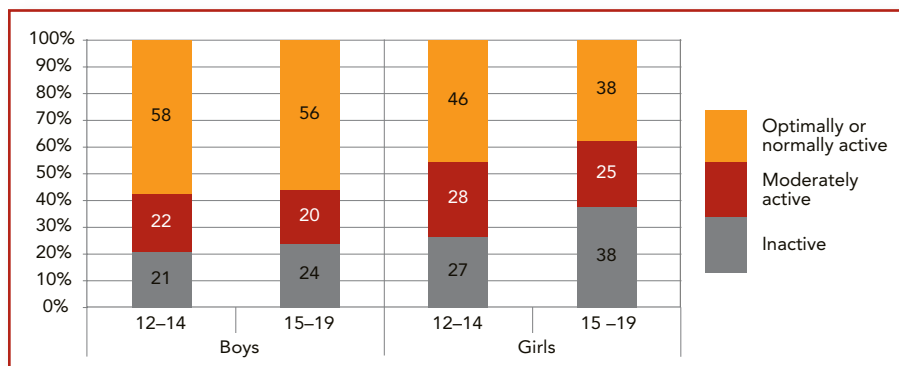
Source: Statistics Canada. "Canadian Community Health Survey," CANSIM, Cycle 3.1 (Ottawa: 2005). CANSIM Table 105-0422

Although they perceive themselves as healthy, most children and youth are not especially active. Fewer than half of Canada's 12- to 19-year-olds are active at least one hour a day or the equivalent. Only one in five is active enough for optimal growth and development. Nearly twice as many boys (27%) as girls (15%) are optimally active.

### RECOMMENDED DAILY ACTIVITY

Canadian guidelines for physical activity recommend that children and youth be active at least 90 minutes per day. They should combine moderate activity, such as brisk walking, skating and bike riding, with vigorous activity, such as running or playing soccer.<sup>25</sup>

### Physical activity among Canadian youth, 2002-2003



Source: Canadian Community Health Survey, 2002-2003. Calculations by Canadian Fitness and Lifestyle Research Institute in 2004 *Physical Activity Monitor*. Available at: [www.cflri.ca/eng/statistics/](http://www.cflri.ca/eng/statistics/). Accessed Sept. 28, 2006

### Overweight and obese

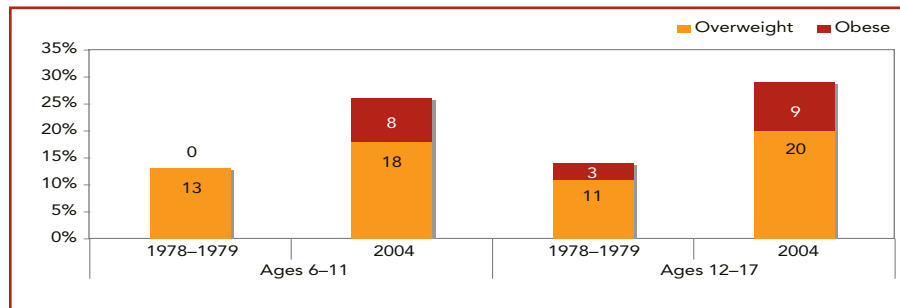
In 2004, nearly one in three Canadians aged 12 to 17 was overweight or obese, a rate that has more than doubled in the past 25 years. The situation is even worse for the most overweight youth. The rate of obesity tripled from 3% to 9% over this period.

Carrying too much weight is not a problem confined to adolescence. One in four children aged six to 11 was overweight or obese in 2004—twice the rate that prevailed in 1978-1979.

25 Public Health Agency of Canada. *Canadian Physical Activity Guides for Children and Youth* (Ottawa: Public Works and Government Services Canada, 2002). Available at <http://www.phac-aspc.gc.ca/pauuap/paguide/>. Accessed Sept. 19, 2006.

# LEARNING IN SCHOOL

## Percentage of obese or overweight children and adolescents



Source: Shields, Margot. "Overweight and obesity among children and youth," *Health Reports*, Vol. 17, No. 3 (Ottawa: Statistics Canada, August 2006). Catalogue No. 82-003

### PROMOTING HEALTHY LIVING IN SCHOOLS

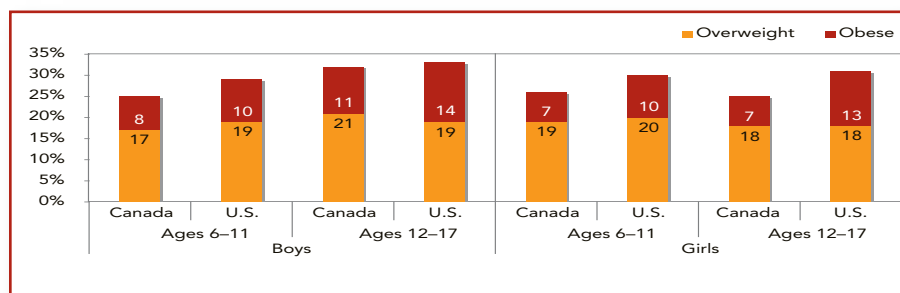
Many provincial governments are helping schools promote healthy living. Examples of programs include Action Schools! BC ([www.actionschoolsbc.ca/](http://www.actionschoolsbc.ca/)) and Healthy Schools in Ontario ([www.opha.on.ca/ohsc/](http://www.opha.on.ca/ohsc/)).

At a pan-Canadian level, ministers of education and health established the Joint Consortium for School Health (JCSH) in 2005. The JCSH aims to strengthen the capacity of health, education and other systems to improve the health and learning of Canada's school-aged children. For more information, please see [www.jcsh-cces.ca](http://www.jcsh-cces.ca).

At the younger ages, boys and girls tend to be overweight or obese in roughly equal proportions. Among adolescents aged 12 to 17, however, boys (32%) were more likely than girls (26%) to be overweight or obese.

There were no significant differences between Canada and the United States in the proportion of overweight or obese boys. However, Canadian girls aged 12 to 17 were about half as likely (7%) as their American counterparts (13%) to be obese.

## Percentage overweight or obese, Canada (2004) and United States (1999-2000)



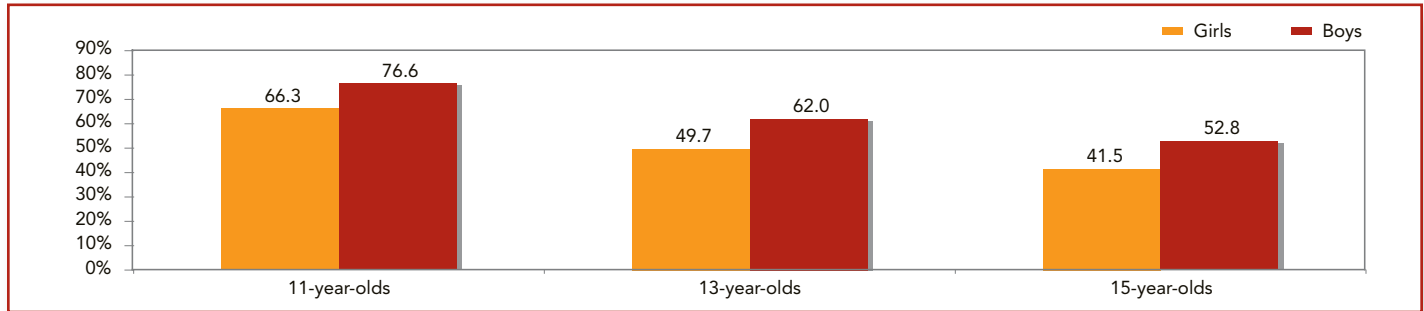
Source: Shields, Margot. "Overweight and obesity among children and youth," *Health Reports*, Vol. 17, No. 3 (Ottawa: Statistics Canada, August 2006). Catalogue No. 82-003.

## Eating breakfast

Children who skip a nutritious breakfast tend to have trouble concentrating at school. By late morning, they can become restless and inattentive, and have trouble completing complex tasks. According to the research, many Canadian adolescents skip breakfast, which could have an impact on their readiness to learn in school.

In 2001-2002, about three-quarters (77%) of 11-year-old Canadian boys ate breakfast every school day, while only two-thirds (66%) of 11-year-old girls did. Among 15-year-olds, the proportion was lower, with just over half of the boys and two of five girls eating breakfast every school day.

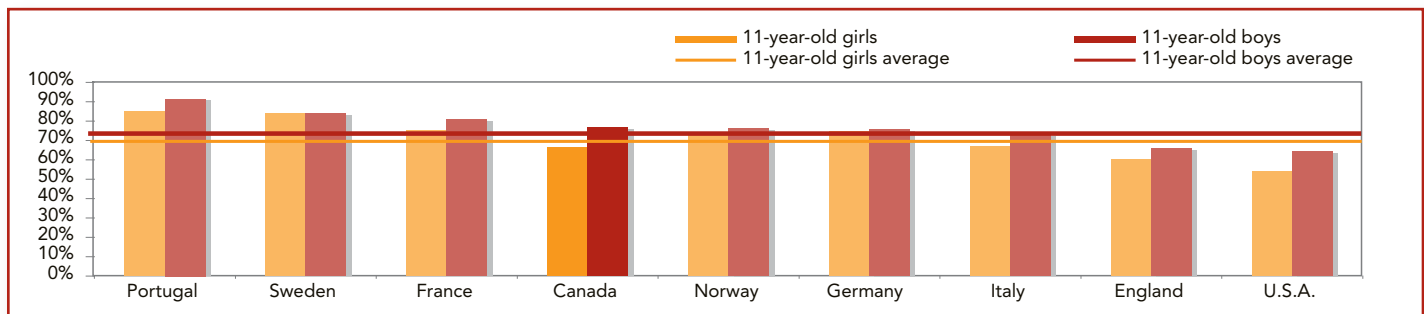
**Proportion of Canadian children eating breakfast every school day, by age and gender, 2001–2002**



Source: World Health Organization. “Young People’s Health in Context. Health Behaviour in School-aged Children Study: International Report from the 2001–2002 Survey,” *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004).

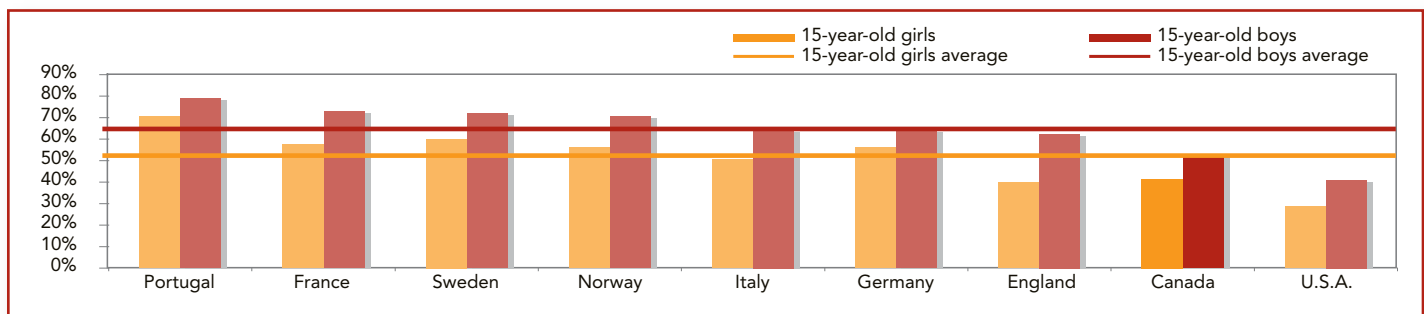
Compared to the breakfast habits of children in other OECD countries, Canada’s 11-year-olds are in the middle of the pack. As for 15-year-olds, however, Canadian children are among the least likely to eat breakfast every school day.

**Proportion of 11-year-olds eating breakfast every school day, international comparison, 2001–2002**



Source: World Health Organization. “Young People’s Health in Context. Health Behaviour in School-aged Children Study: International report from the 2001–2002 survey,” *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004).

**Proportion of 15-year-olds eating breakfast every school day, international comparison, 2001–2002**



Source: World Health Organization. “Young People’s Health in Context. Health Behaviour in School-aged Children Study: International report from the 2001–2002 survey,” *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004).

*School safety and bullying*

In 2000, 57% of Canadian 10- and 11-year-olds reported that they always felt safe at school—a slight increase from 53% in 1994.<sup>26</sup> While many factors can affect a student’s sense of safety, schoolyard bullying has a powerful impact.

Boys are more likely than girls to be bullies. Nearly one in five boys aged 13 and 15 reported bullying others

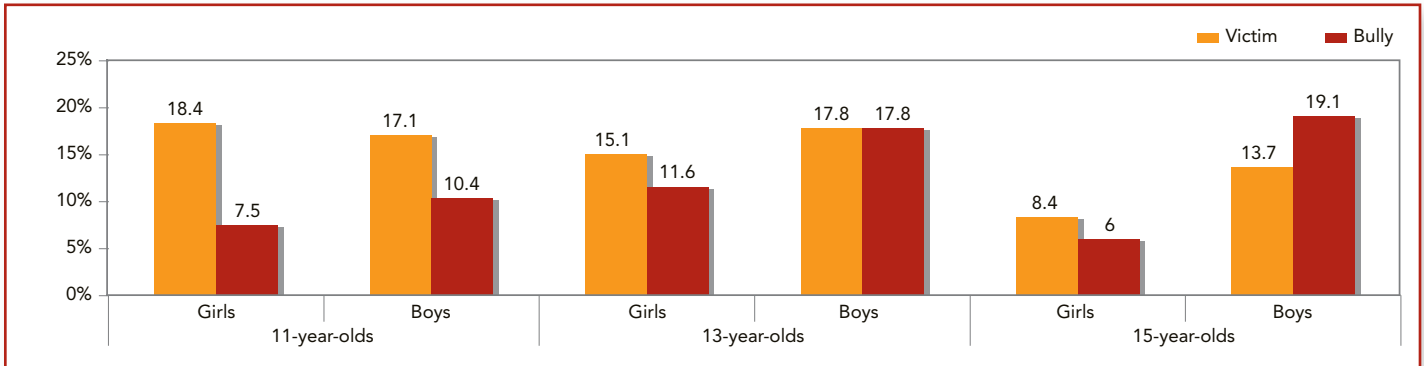
two or three times a month, compared to one in 10 girls aged 13 and just over one in 20 at the age of 15. The difference in bullying rates between boys and girls increases with age.

Younger girls are about as likely as younger boys to be the target of a bully—18% of 11-year-old girls, compared to 17% of boys the same age. By the age of 15, 8% of girls were victimized by bullies, compared to 14% of boys.

26 Canadian Council on Social Development. *The Progress of Canada’s Children and Youth 2006* (Ottawa: 2006), p.27. Available at [www.ccsd.ca](http://www.ccsd.ca). Accessed Oct. 1, 2006.

# LEARNING IN SCHOOL

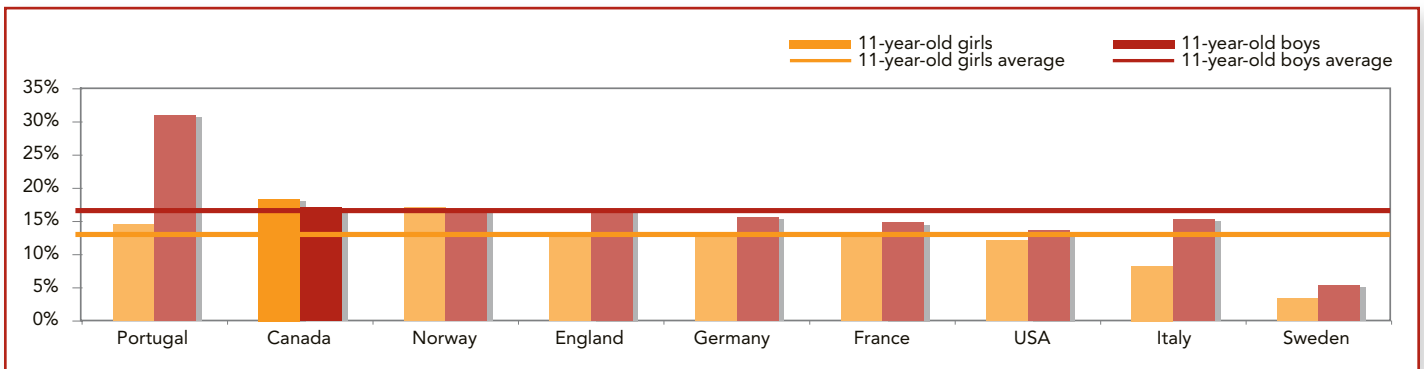
## Proportion of Canadian adolescents who bully or are victims of bullying, by age, 2001–2002



Source: World Health Organization. "Young People's Health in Context. Health Behaviour in School-aged Children Study: International report from the 2001–2002 survey," *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004).

In comparison to other participating OECD countries, Canadian 11-year-olds are among the most likely to be bullied.

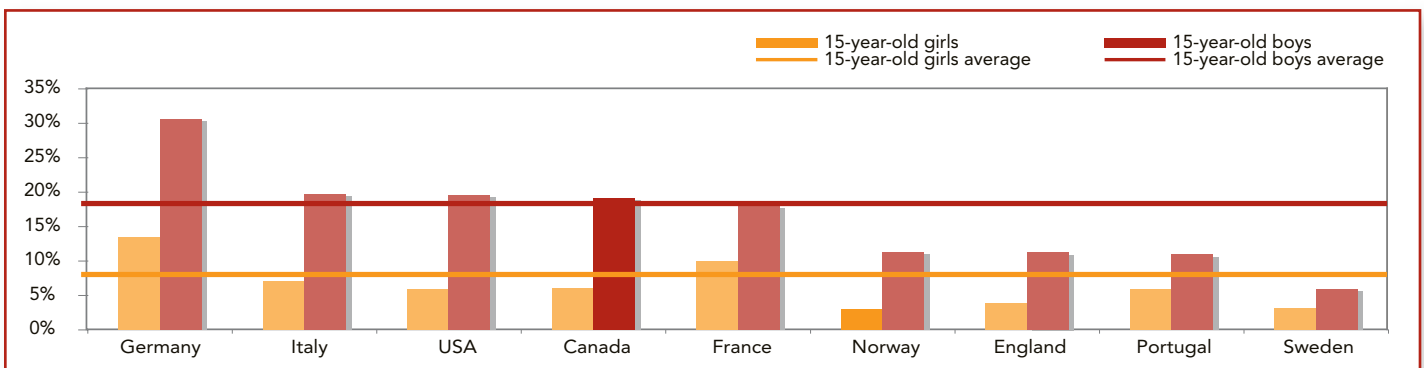
## Proportion of 11-year-old victims of bullying, international comparison of selected countries, 2001–2002



Source: World Health Organization. "Young People's Health in Context. Health Behaviour in School-aged Children Study: International report from the 2001–2002 survey," *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004).

In terms of bullying other children, Canadian 15-year-olds are close to the average of participating countries.

## Proportion of 15-year-old bullies, international comparison of selected countries, 2001–2002



Source: World Health Organization. "Young People's Health in Context. Health Behaviour in School-aged Children Study: International report from the 2001–2002 survey," *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004).



### School engagement

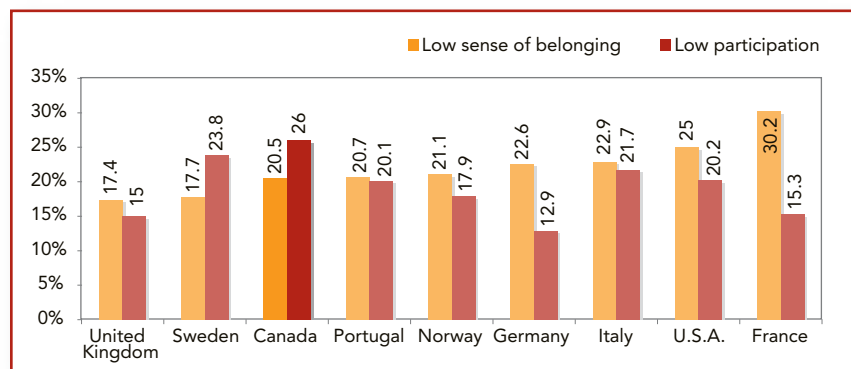
School engagement refers to a student's sense of belonging and the importance the student places on doing well academically, learning new things, making friends, participating in extracurricular activities, getting involved with student council or other groups, and expressing an opinion in class.<sup>27</sup>

Nearly three-quarters (74%) of Canadian youth aged 12 to 15 reported a high level of school engagement in 2000–2001, with girls (77%) more likely than boys (71%) to feel engaged.<sup>28</sup>

Results from the 2000 Programme for International Student Assessment (PISA) study were used to compare the sense of belonging and the level of school participation of students from OECD countries.<sup>29</sup> In this international comparison, relatively few Canadian 15-year-olds had a low sense of belonging to their school (21% versus the OECD average of 25%).

At the same time, however, the proportion of 15-year-old Canadians who did not participate fully in school (26%) was higher than the OECD average (20%). This included students being late for class or failing to attend classes.

### Low sense of belonging and low participation in school, 15-year-olds, international comparison, 2000



Source: Willms, Jon Douglas. *Student Engagement at School: A Sense of Belonging and Participation Results from PISA 2000* (Paris: OECD, 2003). Available at [www.oecd.org](http://www.oecd.org). Accessed Sept. 30, 2006

### HIGH-SCHOOL DROPOUTS

Since the Second World War, the proportion of Canadians who choose to stay in secondary school has been rising. Canadians, like people in other industrialized countries, recognize that economic and social changes are demanding ever more complex skills and knowledge.

The financial and professional benefits of completing high school are generally well understood. In 2005, the unemployment rate for adults without a complete high-school education was 13%—about twice the rate for high-school graduates (7%).<sup>30</sup>

High-school completion opens other doors as well. It is the basic prerequisite for most post-secondary programs. People who have graduated from high school are also more likely to participate in community activities, such as volunteering, and to become engaged citizens.

Education also gives people the skills they need to make better life choices. That is why high-school completion is associated with better health, fewer hospital visits and a longer lifespan.<sup>31</sup>

### What do we know about Canada's progress?

The dropout rate is defined here as the proportion of Canadians aged 20 to 24 who have not completed high school and who are no longer attending school. In recent years, Canada has seen a steady decline in its high-school dropout rate. In 2005–2006, 9% of students dropped out, down from 17% in 1990–1991.

27 Canadian Institute for Health Information. *Improving the Health of Young Canadians* (Ottawa: 2005). Available at <http://secure.cihi.ca>. Accessed Nov. 16, 2006.

28 Ibid.

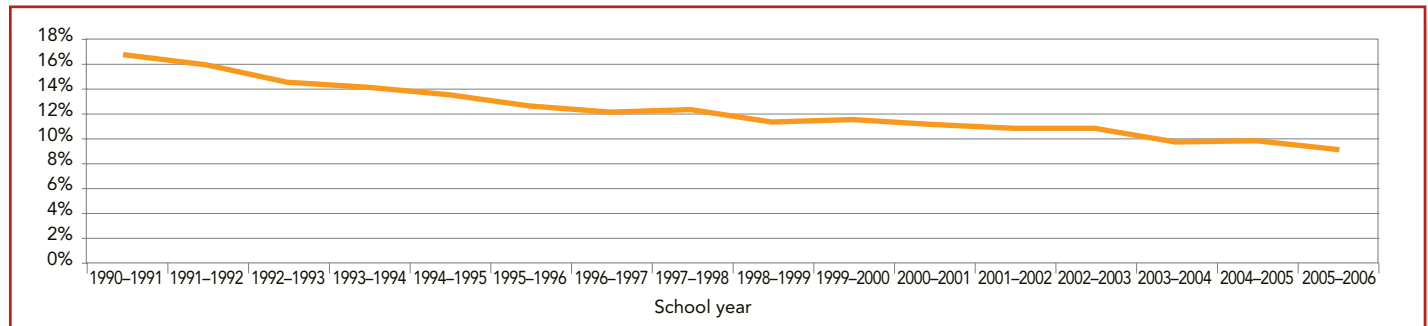
29 Willms, Jon Douglas. *Student Engagement at School: A Sense of Belonging and Participation Results from PISA 2000* (Paris: OECD, 2003). Available at [www.oecd.org](http://www.oecd.org). Accessed Sept. 30, 2006.

30 Statistics Canada, *Labour Force Historical Review* (Ottawa: Statistics Canada, Labour Statistics Division, Feb. 2006).

31 Canadian Council on Learning. "Good news: Canada's high-school dropout rates are falling," *Lessons in Learning* (Ottawa: December 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

# LEARNING IN SCHOOL

## Canadian high-school dropout rates, 1990–1991 to 2005–2006



Source: Statistics Canada. *Labour Force Historical Review* (Ottawa: Statistics Canada, Labour Statistics Division, February 2006)

Other developed countries have also witnessed declines in their dropout rates. In fact, while Canada's dropout rate is lower than that of the United States, Germany and France, it is higher than that of nine other industrialized countries, including several in Scandinavia and Eastern Europe, the United Kingdom, Switzerland and Austria. In 2002, the last year for which comparable data were available, Canada's dropout rate was 11%, more than double the 5% of Norwegians who failed to complete high school.<sup>32</sup>

### High-school dropout rates by country, 2002

Country	Dropout rates
Norway (2003)	4.6%
Slovak Republic	5.5%
Czech Republic	5.9%
United Kingdom	8.0%
Switzerland	8.4%
Poland	8.4%
Sweden	8.6%
Austria	9.9%
Finland	10.1%
<b>Canada</b>	<b>10.9%</b>
United States (2001)	12.3%
Germany	14.2%
France	14.5%
Australia	18.5%

Source: OECD INES-Network B, special YALLE data collection. As presented in de Broucker, Patrice. *Without a Paddle: What to do About Canada's Young Dropouts* (Ottawa: Canadian Policy Research Networks Inc., 2005)

Young men are consistently more likely to drop out of high school than young women. In 2005–2006, the dropout rate for men was 11%, compared with 7% for women. According to Statistics Canada's Youth in Transition Survey, dissatisfaction with school and a desire to earn money are key factors in young men's decisions to leave high school without a diploma.

The dropout rate also remains comparatively high outside Canada's urban centres. In 2004–2005, the dropout rate was seven percentage points lower in cities than in Canada's small towns and rural villages.

### POST-SECONDARY EDUCATION

Canadians recognize the importance of post-secondary education and understand that the role of higher learning is growing. In a 2006 public opinion poll commissioned by CCL, 61% of Canadians felt that a post-secondary education had become much more important than it was 10 years earlier.<sup>33</sup> Indeed, according to CCL's Survey of Canadian Attitudes toward Learning, 83% of Canadians believe that a post-secondary education is critical to success in life.<sup>34</sup>

The evidence seems to back up those views, suggesting that a post-secondary education rewards individuals, communities and the country as a whole.

For the person who continues to acquire learning beyond high school, there are improved job prospects and the potential for higher income. An analysis of labour-market data from the federal government's Canadian Occupational Projection System reveals that there will be shortages in key employment categories by 2013. Two-thirds (66%) of new regular jobs will be in management or other occupations that demand at least a college diploma or apprenticeship training.<sup>35</sup>

In addition to helping people find work, higher education confers other benefits as well. On average, university graduates will earn 40% more over their lifetimes than people who only have a high-school education.<sup>36</sup> On average, people with post-secondary credentials also enjoy better health and well-being. Indeed, 67% of post-secondary graduates rated their health as excellent or

<sup>32</sup> de Broucker, Patrice. *Without a Paddle: What to do About Canada's Young Dropouts* (Ottawa: Canadian Policy Research Networks Inc., 2005).

<sup>33</sup> Pacific Issues Partners. *Canadian Attitudes on Post-secondary Education* (Ottawa: Canadian Council on Learning, 2006). Available at [www.ccl-cca.ca/psepoll](http://www.ccl-cca.ca/psepoll).

<sup>34</sup> Canadian Council on Learning. *Survey of Canadian Attitudes toward Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca/scal/](http://www.ccl-cca.ca/scal/).

<sup>35</sup> Human Resources and Skills Development Canada. *Looking Ahead, A Ten-Year Outlook for the Canadian Labour Market, 2004–2013* (Ottawa: October 2004). Available at <http://www11.hrsdc.gc.ca/>. Accessed Nov. 16, 2006.

<sup>36</sup> Morissette R., Y. Ostrovsky and G. Picot. *Relative Wage Patterns Among the Highly Educated in a Knowledge-based Economy*. Research Paper No. 232 (Ottawa: Statistics Canada, Analytical Studies Branch, 2004). Catalogue No. 11F0019MIE.

very good in 2005, compared to 43% of Canadians without high-school diplomas.<sup>37</sup>

A more educated population is also a more engaged and dynamic one—a clear benefit for communities. There are strong correlations between higher levels of education and increased volunteerism, philanthropy and participation in civic activities, as well as lower crime rates.<sup>38</sup>

The benefits to Canada’s economy are also clear. As the country’s jobs become increasingly sophisticated, there is a need for more skills and knowledge. Post-secondary education also spurs innovation and productivity, which make Canada a more competitive economy.

**WHAT IS POST-SECONDARY EDUCATION?**

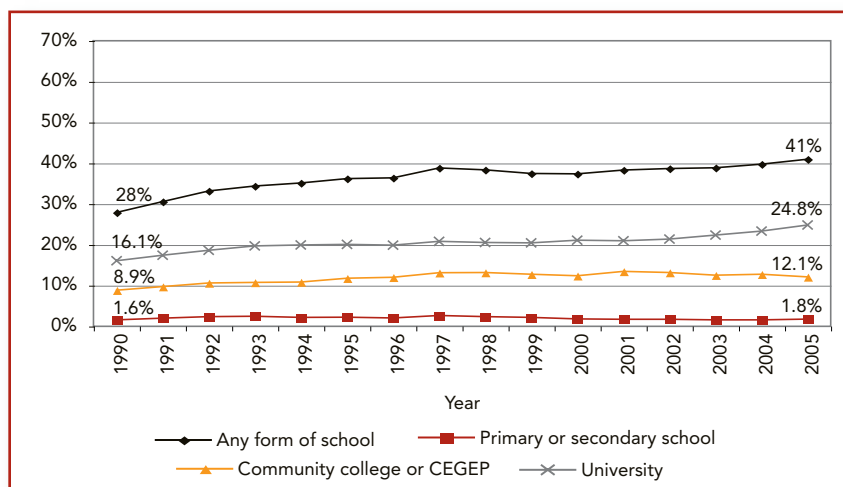
*Post-secondary education refers to academic, technical and vocational programs provided by colleges, Quebec’s CEGEP system, university colleges and universities. Most of these institutions are public but some are private. Graduates from post-secondary programs receive diplomas, certificates or undergraduate or graduate degrees.*

**What do we know about Canada’s progress?**

People in their early 20s tend to enjoy the best opportunity for continued learning, as many young adults have yet to take on the family and financial responsibilities that make formal education more difficult to acquire later in life. And, in fact, the proportion of 20- to 24-year-olds attending post-secondary institutions increased from 25% in 1990 to 37% in 2005.

In recent years, however, men have been less likely than women to enrol in post-secondary education. In 2005, 37% of men aged 20 to 24 were attending school, compared with 45% of women. This gap has widened since 1990, when attendance rates for both genders were around 28%. The gender gap is most pronounced in universities, where enrolment rates in 2005 were 29% for women and 21% for men.

**Educational attendance rates, 20- to 24-year-olds, by type of institution, 1990–2005**



Source: Statistics Canada. *Labour Force Historical Review* (Ottawa: Statistics Canada, Labour Statistics Division, Feb. 2006)

International comparisons are difficult to make because educational systems differ. Even so, Canada’s young adults appear to have among the world’s highest rates of attendance at educational institutions. Canada ranks third among OECD countries, behind the Netherlands and Spain.

*For more information on the post-secondary sector in Canada, please see the Canadian Council on Learning’s report, Canadian Post-secondary Education: A Positive Record – An Uncertain Future.*

37 Statistics Canada, Canadian Community Health Survey, Cycle 3.1, Ottawa.

38 Canadian Council on Learning. *Canadian Post-secondary Education: A Positive Record – An Uncertain Future* (Ottawa: 2006). Available at [www.ccl-cca.ca/pse](http://www.ccl-cca.ca/pse).

# LEARNING IN SCHOOL

## Distribution of 20- to-24-year-olds, by educational situation, 2002

OECD COUNTRIES	NOT IN EDUCATION, ALREADY COMPLETED A POST-SECONDARY EDUCATION	IN EDUCATION	TOTAL
Australia	15.3	37.2	52.5
Austria	4.4	35.0	39.4
Belgium	15.5	39.8	55.3
Canada	16.5	39.3	55.8
Czech Republic	2.4	27.3	29.7
Denmark	2.9	48.4	51.3
Finland	4.3	48.0	52.3
France	11.4	43.5	55.0
Germany	2.9	38.1	41.0
Greece	5.4	35.3	40.7
Hungary	4.3	35.9	40.1
Iceland	1.8	46.1	47.9
Ireland	15.4	30.4	45.7
Italy	1.0	38.2	39.2
Luxembourg	3.7	42.8	46.4
Netherlands	4.1	55.6	59.7
Norway*	6.5	45.7	52.2
Poland	2.1	44.1	46.2
Portugal	4.6	31.7	36.3
Slovak Republic	2.7	23.5	26.2
Spain	13.7	43.4	57.1
Sweden	3.5	39.9	43.4
Switzerland	4.6	38.2	42.8
United Kingdom	14.8	29.5	44.3
United States**	12.4	33.9	46.4
Country mean	9.6	37.1	46.6

\*Year of reference 2003

\*\*Year of reference 2001

Source: Organisation for Economic Co-operation and Development. *Education at a Glance* (Paris: 2005)

## Post-secondary attainment

About 45% of Canada's working-age population had attained some level of post-secondary education in 2004. This rate positions Canada, with Israel, behind the first-place Russian Federation. In particular, Canada is fifth in terms of university attainment and second in terms of people who have completed college or vocational programs.

Data from 2004 show that approximately 22% of working-age Canadians had completed a university degree and a further 22% had completed a college or vocational program.

## Percentage of the working-age population with post-secondary education, by country, 2004

COUNTRY	POST-SECONDARY OF ANY TYPE*	COUNTRY	ACADEMIC/UNIVERSITY/RESEARCH PROGRAMS	COUNTRY	COLLEGE OR VOCATIONAL PROGRAMS
Russian Federation**	55	United States	30	Russian Federation**	34
Israel	45	Norway	29	Canada	22
Canada	45	Israel	29	Japan**	17
United States	39	Denmark	25	Finland	17
Japan**	38	Canada	22	Israel	16
Sweden	35	Australia	22	Sweden	15
Finland	34	Russian Federation**	21	United States	9
Denmark	32	Japan**	21	Australia	9
Norway	32	Sweden	19	Denmark	7
Australia	31	Finland	17	Norway	2

\*\* Year of reference 2003

\* Numbers may not match due to rounding

Source: OECD. *Education at a Glance* (Paris: 2006). Available at [www.oecd.org](http://www.oecd.org)

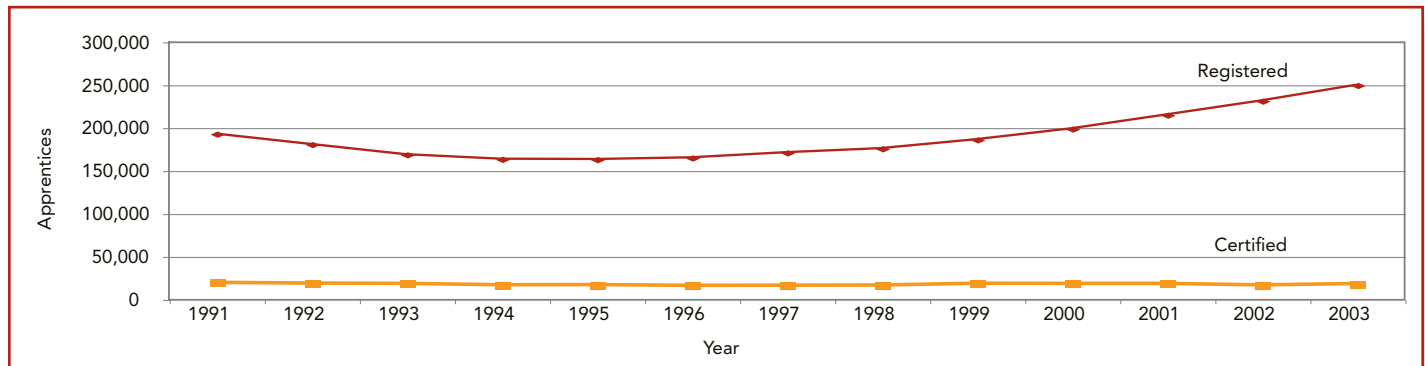
There has also been a dramatic rise in the number of graduate degrees awarded in Canada in recent years. In the decade from 1993 to 2003, there was an increase of 38% in master's and 50% in doctoral degrees.<sup>39</sup>

### Registered apprenticeships

Like other types of post-secondary education, registered apprenticeships give Canadians the skills and knowledge they need to succeed in today's economy. Skilled trades-people are in heavy demand as sectors such as construction, and oil and gas development experience significant job growth.

The number of people registering for apprenticeships has increased over the past 15 years. The number of Canadians actually completing their apprenticeships, however, has remained stable.<sup>40</sup> The growing gap between registrations and certifications can be partly explained by a strong demand for workers, which is luring registrants into the workforce before their apprenticeships are complete.<sup>41</sup>

### Canadian apprentices, registered and certified, 1993–2003



Source: Statistics Canada. "Registered apprenticeship training, registrations by major trade groups and sex, annual (number)," CANSIM (Ottawa). Tables 477-0051 and 477-0052

For more information, please see CCL's Lessons in Learning of July 25, 2006, "Apprenticeship Training in Canada."

<sup>40</sup> Skof, Karl. *Trends in Registered Apprenticeship Training in Canada* (Ottawa: Statistics Canada, 2006). Catalogue No. 81-004-XIE. Available at [www.statcan.ca](http://www.statcan.ca).  
<sup>41</sup> Prasil, S. *Registered Apprentices: The Class of 1992, a Decade Later* (Ottawa: Statistics Canada, Culture, Tourism, and the Centre for Education Statistics, 2005). Catalogue No. 81-595-MIE.

## 3.3 The Road Ahead

### WHERE DOES CANADA STAND?

Indicators of school-based learning suggest that Canada's elementary and secondary school systems are generally equipping students with the basic skills they need to confront the economic challenges of the future. Although skill levels vary significantly from one province to the next, Canadian secondary students, on the whole, enjoy among the world's highest levels of skills and rates of high-school completion. Compared to students in other countries, young Canadians are doing especially well in reading and mathematics, although they are not as strong in problem solving and science.

More Canadians than ever before are also completing post-secondary programs. Indeed, Canada has one of the highest rates of post-secondary attainment in the world, particularly for college and vocational schools. Apprenticeship registration is also at an all-time high in Canada, although completion rates have been low and stagnant for more than a decade.

For all the signs of success, however, Canada cannot afford to rest on its laurels. While Canada has been a world leader in developing an educated and trained population, other industrialized countries are putting similar emphasis on learning.

Indeed, there are issues that already demand attention here at home. For instance, young Canadians may be better prepared for jobs than for their roles as citizens. The data suggest that Canadians' knowledge of their history and political systems is weak and has been declining in recent decades. This has negative implications for the civic and political engagement of future generations.

Other challenges come to light in an examination of the health and safety of school children. There is a high prevalence of bullying, leading many students to feel unsafe in their schools. Many students also feel disengaged from their schools, which could have an impact on their ability to learn. Moreover, rising levels of obesity and physical inactivity raise worrisome questions about current learning and the evolving health status of Canada's population.

### WHAT DON'T WE KNOW?

#### Elementary and secondary school learning

The 2003 PISA results raise questions that will demand further analysis in light of data that will emerge from the 2006 version of PISA. For example, the 2006 PISA results may help explain whether a decline in Canadian science skills between 2000 and 2003 was an aberration or a trend. More data could also illuminate discrepancies in the performance of students in different regions of the country and in French-language schools outside Quebec.

Despite signs of decreasing civic literacy and voter participation, there has been no regular and comprehensive method of monitoring Canadian students' knowledge of politics and history.

Similarly, much remains unknown about school children's health and its effect on their ability to function in the classroom. Further research could explore:

- the environmental and other factors affecting the health of Canadian children and youth
- how much students know about their health, healthy living and the health system
- the extent to which the school system, parents and the broader community can promote healthy living among youth
- the engagement and empowerment of youth in decision-making as a way to improve their learning and health

Significant data gaps have also been identified in relation to:

- the health status and health-related behaviours of children and youth
- student safety in schools
- the interaction between health and learning
- the impact of the physical and social environments on the health of young people
- the quantity and quality of health interventions in schools

## Post-secondary learning

The Canadian Council on Learning's 2006 report, *Canadian Post-secondary Education: A Positive Record – An Uncertain Future*, describes critical information gaps in the field of post-secondary education. Specifically:

- It is difficult to determine whether Canada's post-secondary graduates are equipped with the skills and knowledge needed to succeed in the economy, particularly in comparison to graduates of other countries.
- There is a need for better understanding of supply and demand in the labour market, especially in the skilled trades.

Moreover, Canada has no direct measures of the quality of post-secondary education; only proxy data exist, such as graduate satisfaction levels. Much of the data that do exist are not consistent or comparable across provinces, or with data from other countries. Even information on the outcomes of education is available only in some provinces.

## WHAT WILL CCL DO?

### Research on elementary and secondary school learning

Kindergarten and the first 12 grades of school are a major focus of research at CCL. Currently, CCL's Research and Knowledge Mobilization Directorate is conducting research in the following areas:

- the effect of homework on academic achievement
- the consequences of inclusion in mainstream classrooms for students with special educational needs
- the effectiveness of various instructional practices for children in junior kindergarten to Grade 3
- the academic opportunities and progress of immigrant students in English as a Second Language (ESL) programs
- the ability to identify risk factors for language and literacy problems
- the ability to predict language, cognition and psychiatric disorders in adolescence

Over the next year, CCL will also publish short *Lessons in Learning* research reports on French immersion, homework, Aboriginal learning and critical thinking.

### Healthy schools

Health and education are inextricably linked. Schools provide an excellent setting for children and youth to learn about and practise healthy habits that will last them a lifetime. Conversely, good health also helps young people concentrate and absorb their lessons at school. CCL's Health and Learning Knowledge Centre will therefore continue to monitor and report on issues related to healthy schools and the health of school-aged children.

Three CCL working groups are already immersed in this issue. One group is focussing on health matters within schools. A second is studying the impact of recreational and other activities outside regular school hours. The third is searching for ways to engage youth in healthy behaviours.

The working groups will collaborate with other organizations active in the field to identify the issues and relevant indicators, to help exchange and promote new knowledge, and to assess directions for future investigation.

### Assessment and monitoring tools

CCL's Research and Knowledge Mobilization Directorate is currently developing three assessment and monitoring tools that would be made available to elementary and secondary school educators free of charge. They are:

- an assessment tool to help teachers ensure that their tests match their lessons
- a student self-assessment tool that constructs student self-assessments, scores them, and explains the results in plain language to students
- a student engagement monitoring tool to provide timely information about the level of students' engagement in their school and school work

### Post-secondary education

In late 2006, CCL released the first in a series of annual reports on the state of post-secondary education in Canada. The reports will be updated annually with the most recent statistics and indicators, and will continue to outline the latest priorities in the area of post-secondary education.





# ADULT LEARNING

## 4.1 Introduction

Adult learning refers to all education and training taken by adults for professional or personal reasons within a lifelong learning perspective.<sup>1</sup> Adult learning can take many forms, including returning to formal education, taking courses for work or for pleasure, volunteering or participating in community activities, or pursuing interests and hobbies.

Specifically, what constitutes adult learning can be characterized as formal or informal learning. In formal learning, activities occur within a structured, ladderized context and lead to a recognized credential; and are intended either for personal or work-related reasons. Informal learning includes activities that are loosely structured, self-paced and self-directed; and are similarly intended for either personal or work-related objectives. Adult learning plays a critical role in allowing Canadians to maintain the skills and knowledge needed to make informed decisions and lead successful lives as workers, citizens, and as members of families and communities.

Yet, despite the importance of adult learning, Canada is faced with a number of challenges:

- Rates of adult participation in education and training have not grown significantly over the last decade.
- There are still segments of society with unmet learning needs, and those in need are least likely to get further education and training. This may be due, in part, to financial and time constraints or the inability to access available opportunities.
- And, most importantly, as long as adult learning is viewed narrowly in terms of the labour market, and largely focusses on the education and training of youth, the country's ability and desire to develop a learning culture will be limited.

*There are approximately 18.2 million adults (aged 25 to 64) in Canada, comprising 56% of the population.<sup>2</sup> Seniors aged 65 and older make up another 13% of the population. By 2031, roughly one-quarter of the population, or 9.4 million people, will be seniors.<sup>3</sup>*

The prospect of workforce and skills shortages caused by the pending retirement of the baby-boom generation, combined with continuing low fertility levels and fewer youth entering the labour market, adult learning is now more critical than ever. Canada's labour force supply is projected to grow by less than 5% over the next five decades, a rate that may not sustain past improvements in living standards.<sup>4</sup>

Canada's economic well-being and competitiveness therefore depend on having a flexible and skilled workforce ready to meet the demands of the global economy. Adult learning allows individuals to maintain or strengthen the skills necessary to participate effectively in the labour market and help Canada improve its economic productivity. As new technologies continue to transform the way Canadians live and work, there is an ongoing need to upgrade the skills of the existing workforce.

Yet, international comparisons have indicated that Canada is at risk of jeopardizing its international competitiveness. The World Economic Forum issues a yearly Global Competitiveness Index, which ranks countries on indicators such as health and primary education, macro-economy, higher education and training, technological readiness, and innovation. In 2006, Canada ranked 16<sup>th</sup> on the general index, while it ranked 13<sup>th</sup> in 2005. In the sub-indices, Canada's international ranking in the technological readiness slipped from 15<sup>th</sup> in 2005 to 17<sup>th</sup> in 2006. Most importantly, Canada's international position in the priority organizations place on employee training slipped from 12<sup>th</sup> in 2002 to 20<sup>th</sup> in 2004.<sup>5</sup>

There is also a need to replace retiring workers. Immigration plays a key role in replacing these workers, as well as contributing to a skilled labour force. Immigrants accounted for 70% of net labour-force growth between 1991 and 2001—a proportion that is projected to reach 100% in the next decade.<sup>6</sup>

However, for many newcomers to Canada it is quite difficult to integrate into the Canadian labour market, either because of language barriers or a lack of recognition of previously acquired learning. Better access to learning opportunities will endow immigrants with the skills, credentials and language proficiencies they need to contribute fully in the economy.

1 OECD. *Beyond Rhetoric: Adult learning policies and practices* (Paris: 2003).

2 Statistics Canada. "Estimates of population, by age group and sex, Canada, provinces and territories, annual," CANSIM (Ottawa). Table 051-0001. CANSIM Table 051-0001.

3 Statistics Canada. *Population Projections for Canada, Provinces and Territories. 2005-2031* (Ottawa: 2005). Catalogue No. 91-520-XIE.

4 OECD. *Living Longer, Working Longer* (Paris: 2005).

5 International Institute for Management Development. *World Competitiveness Yearbook 2004* (Lausanne, Switzerland: 2004).

6 Denton, F., C. Feaver, and B. Spencer. "Immigration and Population Aging," *Canadian Business Economics*, Vol. 7, No. 1 (Ottawa: Canadian Association for Business Economics, 1999), p. 39-57.

# ADULT LEARNING

Adult learning has wide-ranging benefits, both for individuals and society. For example, research has shown that people with more schooling tend to lead longer and healthier lives.<sup>7</sup> It also suggests that adult learning builds social cohesion and an informed and engaged population—both key ingredients of a healthy

democracy. While work is needed to understand better the relationship between learning within the community and personal well-being, preliminary research suggests that individuals, actively involved in their communities, are more likely to express satisfaction with their lives.<sup>8</sup>

## 4.2 Indicators of Adult Learning

This chapter explores the state of adult learning in Canada by examining four main categories of indicators.

INDICATORS OF ADULT LEARNING	
Adult literacy	
Health literacy	
Work-related learning	<ul style="list-style-type: none"> <li>• Formal learning</li> <li>• Informal learning</li> <li>• Work-related training</li> </ul>
	<ul style="list-style-type: none"> <li>• Employer-supported training</li> </ul>
	<ul style="list-style-type: none"> <li>• School-to-work transitions</li> </ul>
Personal and community learning	<ul style="list-style-type: none"> <li>• Volunteering</li> </ul>
	<ul style="list-style-type: none"> <li>• Participation in clubs and organizations</li> </ul>
	<ul style="list-style-type: none"> <li>• Internet use</li> </ul>

### ADULT LITERACY

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.

Literacy can be broken down into four main skill sets,<sup>9</sup> all of them necessary for success in an increasingly knowledge-based society. (See text box.)

### FOUR LITERACY SCALES

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

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

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

**Problem solving**—goal-directed thinking and action in situations for which no routine solutions exist. The problem solver has a more or less well-defined goal, but it is not immediately obvious how to reach it. The understanding of the problem situation and its step-by-step transformation, based on planning and reasoning, constitute the process of problem solving.<sup>10</sup>

7 OECD and Statistics Canada. *Literacy in the Information Age: Final Report of the International Adult Literacy Survey* (Paris and Ottawa: 2000).  
 8 Schellenberg, Grant. *2003 General Social Survey on Social Engagement, Cycle 17: An Overview of Findings* (Ottawa: Statistics Canada, 2004).  
 9 Statistics Canada. *International Adult Literacy and Life Skills Survey* (Ottawa: 2003).  
 10 *Ibid.*

The Organisation for Economic Co-operation and Development (OECD) defines the following five levels of literacy:<sup>11</sup>

**Level 1**—*Very poor literacy skills.* An individual at this level may, for example, be unable to determine from a package label the correct amount of medicine to give a child.

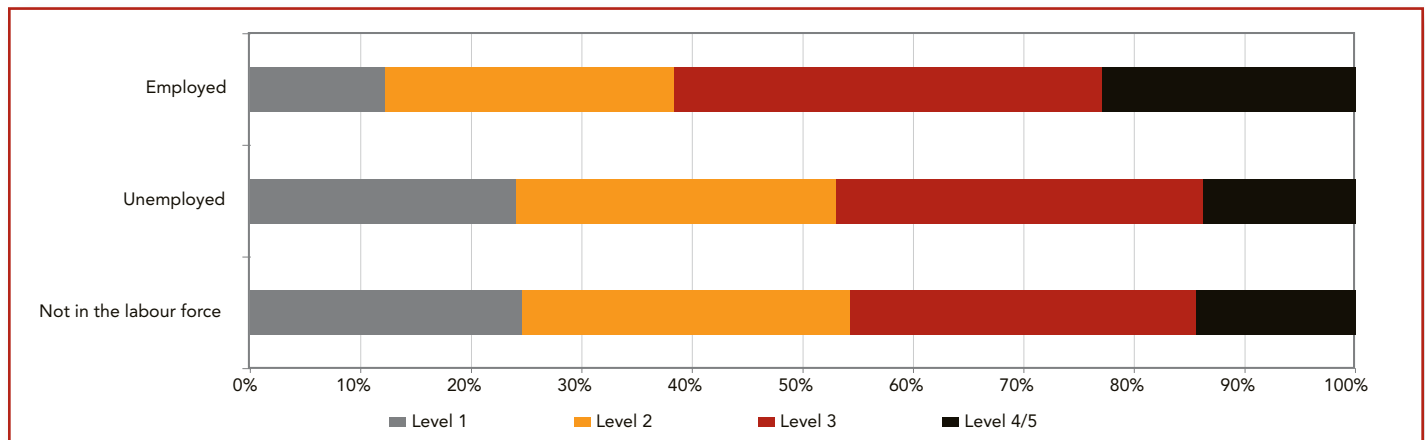
**Level 2**—*A capacity to deal only with simple, clear material involving uncomplicated tasks.* People at this level may develop everyday coping skills, but their poor literacy makes it hard to conquer challenges such as learning new job skills.

**Level 3**—*Adequate to cope with the demands of everyday life and work in an advanced society.* It roughly denotes the skill level required for successful high-school completion and college entry.

**Levels 4 and 5**—*Strong skills.* An individual at these levels can process information of a complex and demanding nature.

Literacy skills benefit individuals, their communities and the economy.<sup>12</sup> For example, people with higher literacy levels are more likely to be employed. More than half of all jobless Canadians have document literacy scores below Level 3—the minimum considered adequate to cope with the demands of a knowledge-based society.<sup>13</sup>

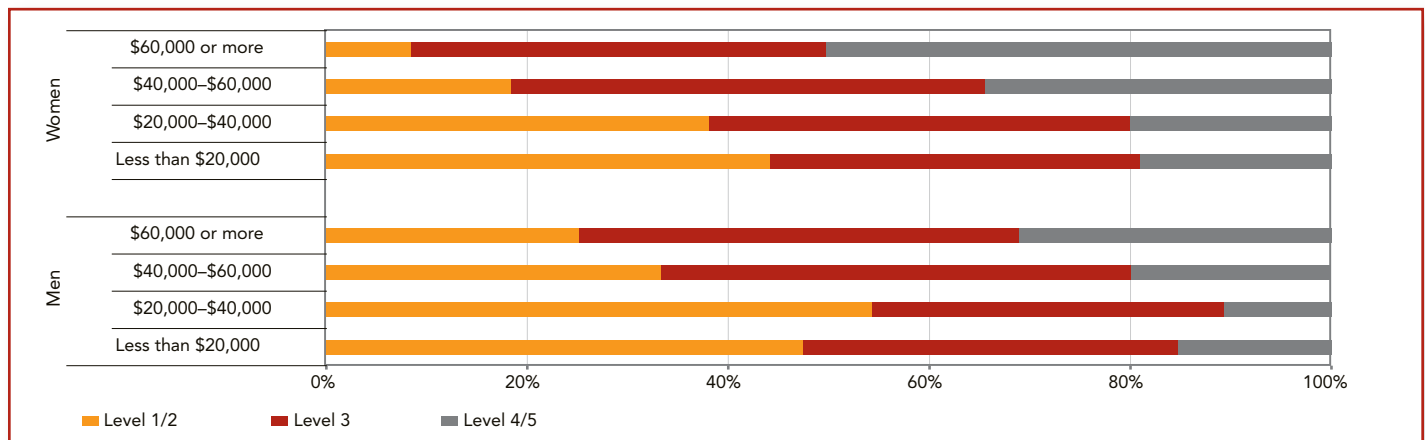
**Labour force population\* by document proficiency level, 2003**



\*The labour force population is defined as respondents aged 16 to 65 who are either employed or unemployed and looking for work.<sup>14</sup>  
 Source: Statistics Canada. *Building Our Competencies: Canadian Results of the International Adult Literacy and Life Skills Survey 2003* (Ottawa: 2005)

Higher prose literacy is also associated with higher earnings. This trend is more pronounced for women than men.<sup>15</sup>

**Annual earnings by prose literacy level and gender, Canadians aged 16–65, 2003**



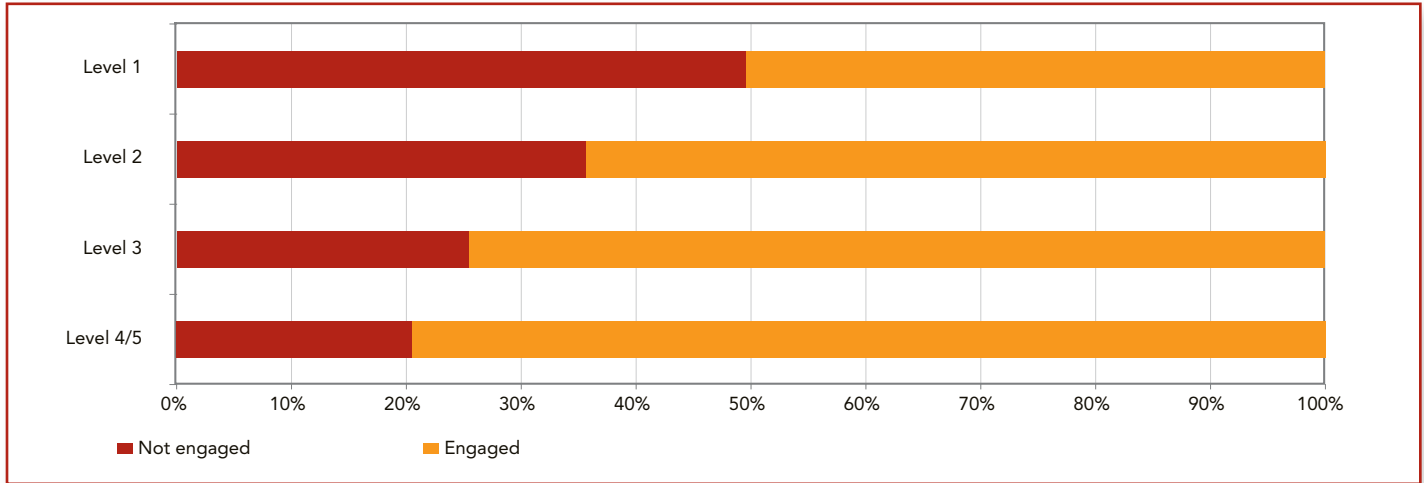
Source: Statistics Canada. *Building Our Competencies: Canadian Results of the International Adult Literacy and Life Skills Survey 2003*

11 OECD and Statistics Canada. *Literacy in the Information Age: Final Report of the International Adult Literacy Survey* (Paris and Ottawa: 2000).  
 12 Mingat, A., and J. Tan. "The full social returns to education: Estimates based on countries' economic growth performance," *Human Capital Development Working Papers* (Washington, D.C.: The World Bank Group, 1996).  
 13 Statistics Canada and Human Resources and Skills Development Canada. *Building on our Competencies: Canadian Results of the International Adult Literacy and Life Skills Survey 2003* (Ottawa: 2005). Catalogue No. 89-617-XIE.  
 14 Based on Statistics Canada analysis in *Building Our Competencies: Canadian Results of the International Adult Literacy and Life Skills Survey 2003* (Ottawa: 2005).  
 15 *Ibid.*

# ADULT LEARNING

Higher literacy levels are also associated with greater community involvement. In 2003, only 50% of Canadian adults at the lowest level of prose literacy were engaged in civic activities like volunteering and participation in community groups, compared to 80% of those at the highest levels.<sup>16</sup>

## Civic engagement by prose proficiency, Canadians aged 16 and over, 2003



Source: International Adult Literacy and Life Skills Survey, 2003

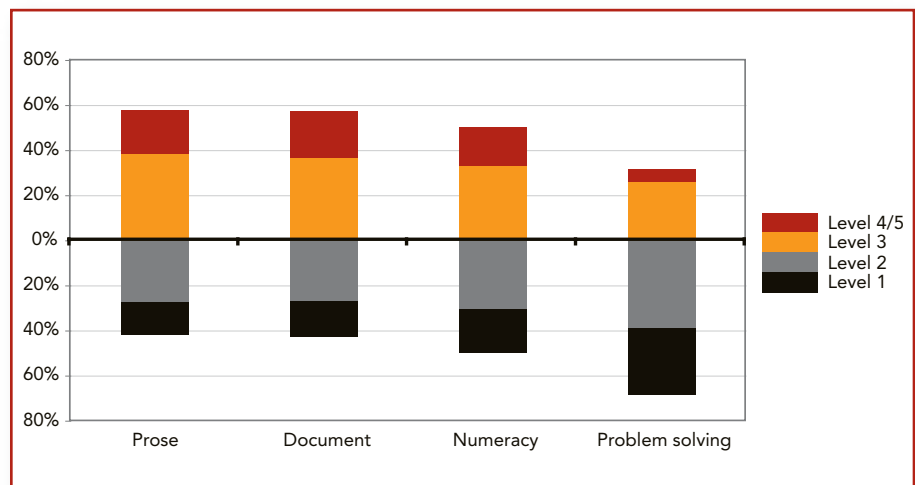
Even small changes in the literacy skills of a population can have a profound effect on a national economy. A 1% rise in literacy levels can result in a 1.5% increase in GDP per capita and a 2.5% improvement in labour productivity.<sup>17</sup> Importantly, increased labour productivity was the most important driver of economic growth among most industrialized countries over the past decade.<sup>18</sup>

## What do we know about Canada's progress?

Extensive data about the literacy performance of Canadians aged 16 and older was collected by Statistics Canada in its 2003 International Adult Literacy and Life Skills Survey. The following observations come from this survey, published in 2005, in combination with a variety of other sources.

On the prose and document literacy scales, 42% of Canadian adults—about 9 million people aged 16 to 65—performed below level three, the minimum considered necessary to succeed in today's economy and society. On the numeracy scale, 50% of Canadian adults scored below level three.

## Percentage of the population by proficiency level, Canadians aged 16–65, 2003



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

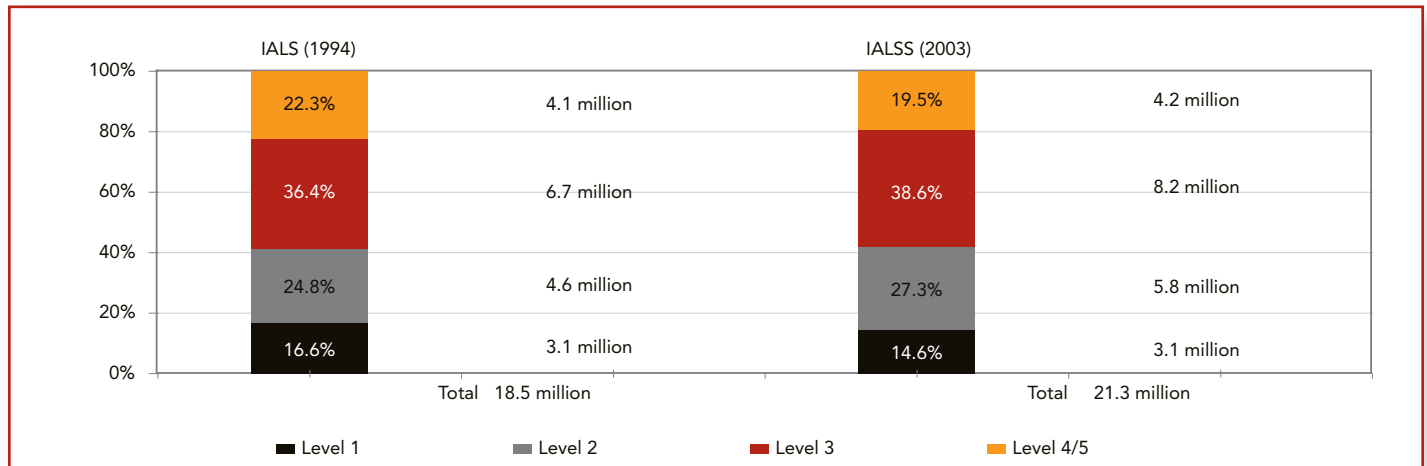
<sup>16</sup> Statistics Canada. *International Adult Literacy and Life Skills Survey* (Ottawa: 2003).

<sup>17</sup> Coulombe, S., J.F. Tremblay and S. Marchand. *Literacy Scores, Human Capital and Growth across Fourteen OECD Countries* (Ottawa: Statistics Canada, 2004). Catalogue No. 89-552-MIE.

<sup>18</sup> OECD. *Education at a Glance* (Paris: 2006).

The International Adult Literacy and Life Skills Survey (IALSS) found no substantial change in adult literacy over the previous decade. Since 1994, when a similar survey (International Adult Literacy Survey, IALS) was conducted, there was a slight decline in the proportion of adults in the highest and lowest literacy levels, and an increase in the middle levels.<sup>19</sup>

**Prose literacy levels among Canadians aged 16–65, 1994 and 2003**



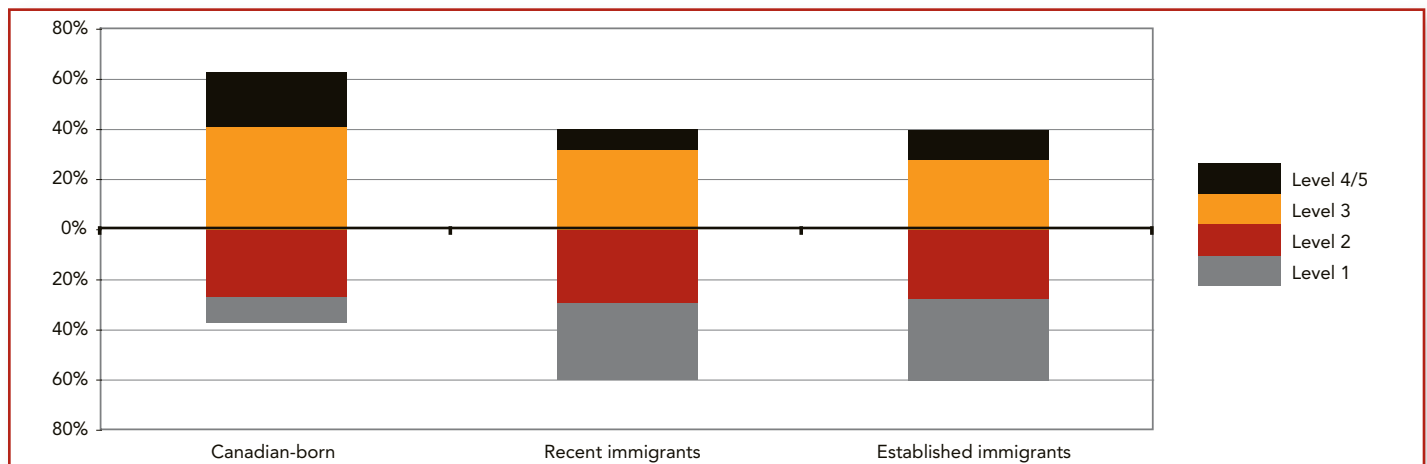
Source: International Adult Literacy Survey (1994) and International Adult Literacy and Life Skills Survey (2003)  
 Note: These figures do not include the three territories

Among immigrants, performance is below the average for the Canadian-born population in all literacy domains. This is despite the fact that new immigrants are more educated than in the past and are twice as likely as the Canadian-born population to have a university education.<sup>20,21</sup>

Literacy levels are similar for recent and established immigrants.<sup>22</sup> However, more recent immigrants (those who have been here less than a decade) tend to catch up with established immigrants a little more quickly than established immigrants who have settled in Canada for more than a decade. This may be explained in part by the high educational attainment of today’s immigrants, along with strong levels of literacy in their mother tongues.<sup>23</sup>

**Comparison of distributions by proficiency level, recent immigrants, established immigrants versus Canadian-born adults**

Percentages by prose skill level, recent immigrants (≤ 10 years), established immigrants (> 10 years) and Canadian-born adults, ages 16–65, Canada, 2003



Source: Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005)

19 Statistics Canada and HRSDC, *Building on our Competencies, 2005*  
 20 *Ibid.*  
 21 Citizenship and Immigration Canada. *Recent Immigrants in Metropolitan Areas: Canada—A Comparative Profile based on the 2001 Census* (Ottawa: 2005).  
 22 According to Statistics Canada’s definition, established immigrants have resided in Canada for 10 years or more, and recent immigrants, 10 years or less. Statistics Canada and HRSDC, *Building on our Competencies, 2005*  
 23 Statistics Canada. *International Adult Literacy and Life Skills Survey* (Ottawa: 2003).

# ADULT LEARNING

## HEALTH LITERACY

The World Health Organization defines health as more than the absence of disease or infirmity. It is “a state of complete physical, mental and social well-being.” Researchers have also drawn a connection between learning and health: people with more education tend to live longer, healthier lives.

More recently, experts have also come to understand that the relationship between health and learning is long term. At all ages and stages of people’s lives, learning and health are closely linked.

Health literacy, defined as “the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions,”<sup>24</sup> can have a direct and meaningful impact on health. It enables a person to read nutrition labels, follow dosage directions for medications, and make healthy lifestyle choices.

### HEALTH LITERACY AND DIABETES

*Diabetes is an example of a complex health condition that demands at least an adequate level of health literacy. Treatment involves closely monitoring blood sugar levels, following a healthy diet, increasing physical activity, taking medication and, for many diabetics, injecting insulin. Diabetics need to learn how to interpret blood sugar levels, read nutrition labels, plan exercise programs and adjust medication dosages—tasks that require a considerable degree of health literacy. The consequences of failure are dire, since the complications of poorly managed diabetes can include nerve damage, eyesight loss, heart and circulatory problems and kidney failure.<sup>25</sup>*

While education, health literacy and health status are generally understood to be linked, the cause-and-effect relationship has not yet been fully explored. Researchers are also finding other factors that appear to influence this complex interrelationship, including people’s social support networks, their decision-making and problem-solving capacities, and their ability to participate in their own health care.

Canada’s aging population is making the need for strong health literacy skills more urgent. Older people are more likely to have chronic diseases and to require health services. Moreover, literacy skills tend to decline with age and lower literacy is tied to poorer health. For all these reasons, Canada must focus on helping older citizens maintain their literacy skills, while at the same time devising more effective ways to communicate health information.

*The Adult Literacy and Life Skills (ALL) survey originally intended to measure prose and document literacy, as well as numeracy. However, there was no plan to measure health literacy. But amid growing interest in the link between literacy and health, a health literacy scale was retroactively assembled out of 191 health-related items on the survey.*

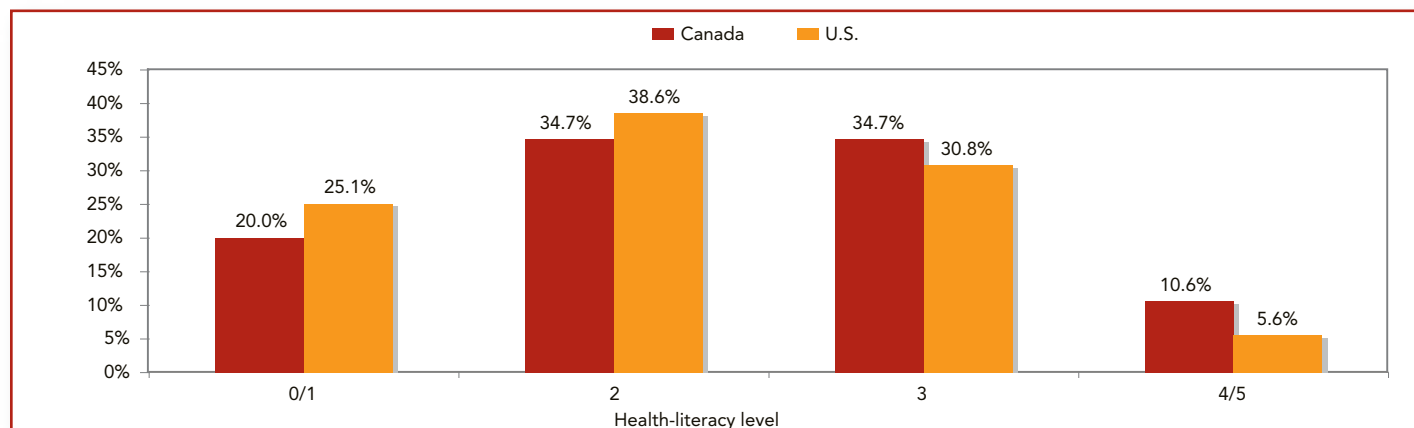
### What do we know about Canada’s progress?

More than half (55%) of working-age Canadians do not have adequate levels of health literacy, the Adult Literacy and Life Skills survey reveals. However, health literacy in Canada is greater than in the United States, with 46% of Canadian adults having skills at level three (adequate) or better, compared to 36% of Americans.

<sup>24</sup> Institute of Medicine. *Health Literacy: A Prescription to End Confusion* (Washington, D.C.: 2004).

<sup>25</sup> Rothman, R.L., et al. “Influence of Patient Literacy in the Effectiveness of a Primary Care-based Diabetes Disease Management Program,” *The Journal of the American Medical Association*, Vol. 292;1711-6 (Chicago, IL: American Medical Association, 2004).

### Health-literacy levels, ages 16–65, Canada and United States, 2003



Source: Adult Literacy and Life Skills Survey, 2003

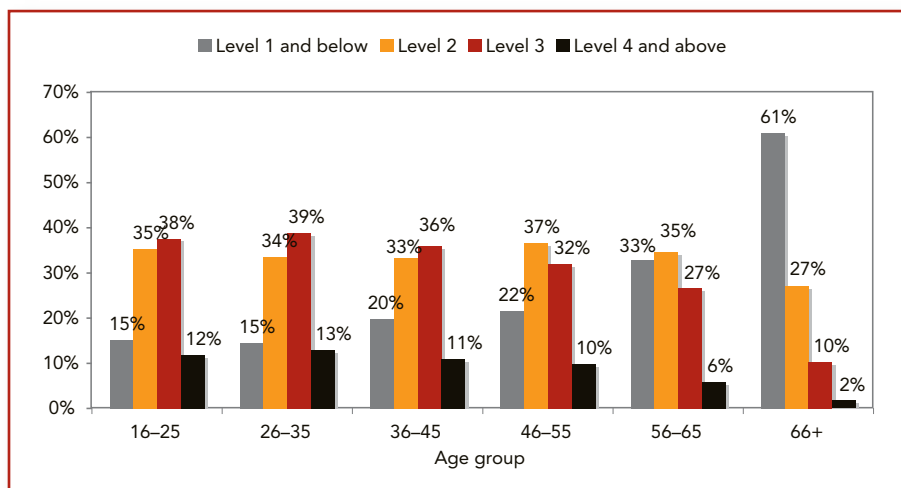
Only one in eight adults (12%) over age 65 has adequate health literacy skills. This is particularly significant in light of the fact that seniors are more likely to suffer ill health. Indeed, nine in 10 seniors take at least one medication, and many take several at the same time.<sup>26</sup>

Health literacy tends to rise with the level of formal education attained, and people with higher health literacy scores tend to be in better health. Indeed, people with the lowest health literacy skills are more than three times as likely to be in fair or poor health than those with the highest levels.

This education-related difference holds true at all ages. At the same time, it is also true that all literacy scores tend to decline with age. The consequence of these two trends is that the gap in health literacy between more and less educated people tends to become more pronounced in older populations. This is a concern for many seniors who lack the literacy skills for many basic health-related decisions.

Other populations that often lack the reading skills needed to deal with health information include people with very low incomes, Aboriginal Peoples, and recent immigrants with low levels of formal education and a mother tongue other than English or French. Recent immigrants who arrive with a good education constitute a fairly large subgroup that is only moderately likely to encounter problems related to low health literacy.<sup>27</sup>

### Health literacy by age group, 2003



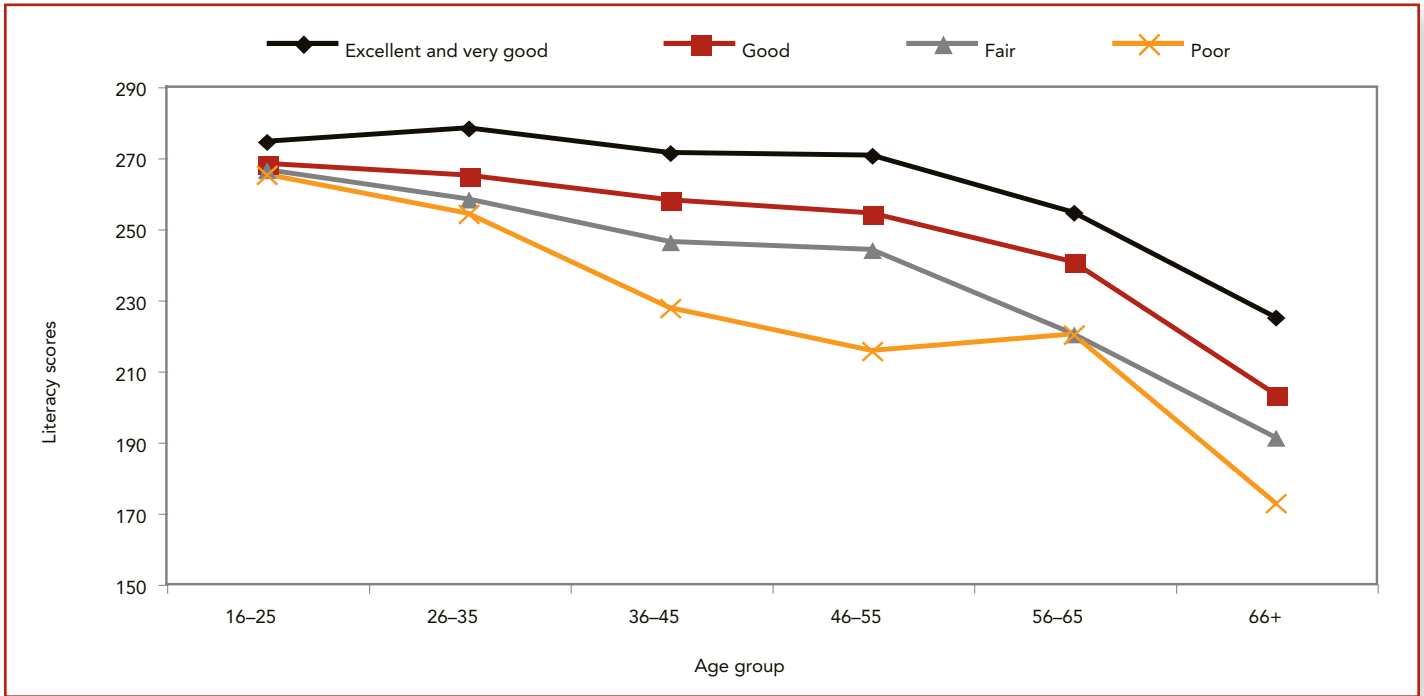
Source: Adult Literacy and Life Skills Survey, 2003

26 Roterman, Michelle. "Seniors' Health Care Use," *Supplement to Health Reports*, Vol. 16 (Ottawa: Statistics Canada, 2006). Catalogue No. 82-003.

27 Murray, Scott et al. *Health Literacy in Canada: The Matter in Empirical Perspective* (Ottawa: Statistics Canada and the Canadian Council on Learning, Forthcoming).

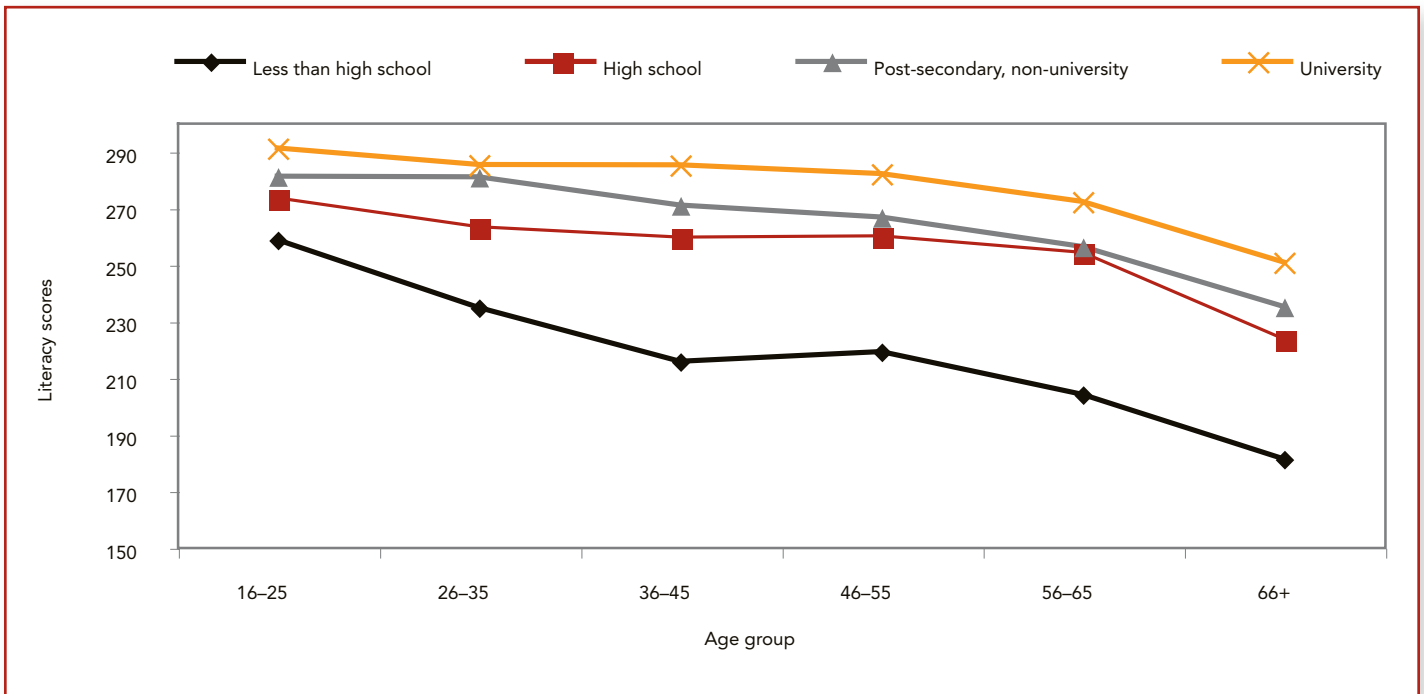
# ADULT LEARNING

## Health literacy by age group and health status, Canada, 2003



Source: Adult Literacy and Life Skills Survey, 2003

## Health literacy by age and education, 2003



Source: Adult Literacy and Life Skills Survey, 2003



## WORK-RELATED LEARNING

Work-related learning encompasses a variety of mechanisms by which employees can better their skills and knowledge in the course of their working lives. The term includes the acquisition, upgrading or updating of job-specific skills, as well the strengthening of *soft skills*, such as communication, critical thinking and problem-solving abilities.

Work-related learning, which can be initiated by workers, unions or employers, can be formal or informal. It may be supported by the employer, or pursued independently by the employee.<sup>28</sup>

For individuals, the benefits of work-related learning are widespread: it can lead to a new job, better performance at an existing job, or career advancement. Research demonstrates that work-related learning brings higher earnings and better chances for promotion, while decreasing the probability of unemployment.<sup>29</sup> It can also foster positive work attitudes and behaviours, and higher levels of employee satisfaction.<sup>30</sup>

Employers benefit as well from an investment in workplace learning. Employer-supported training fosters innovation in products, services and processes, including the application of new technologies or software.<sup>31</sup> Training also improves corporate culture and morale and strengthens a company's ability to attract and retain high-quality staff.<sup>32</sup>

Overall, these effects translate into better business performance, higher productivity<sup>33</sup> and greater business success.<sup>34</sup>

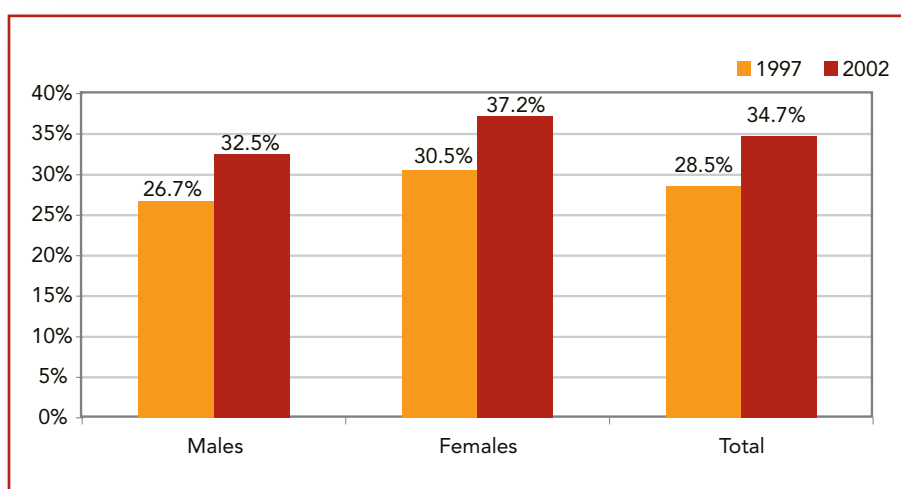
## What do we know about Canada's progress?

### Formal work-related training

Formal work-related training includes courses or programs related to a worker's current or future job. A trainee typically follows a prescribed course or program that culminates in some type of formal recognition, such as a certificate, diploma or degree.<sup>35</sup>

The proportion of Canadian workers enrolled in formal work-related training rose from 29% in 1997 to 35% in 2002.<sup>36</sup> Women (37%) were more likely than men (33%) to participate in such training in 2002.

### Employed adults\* in formal work-related training, by gender, 1997 and 2002



\* The adult workforce is defined here as the population aged 25–64 who were employed at some point during the reference year.

Source: Statistics Canada, Adult Education and Training Survey

Younger workers were most likely to take part in formal work-related training in 2002, and participation rates tend to decline with age. However, a comparison of data from 1997 and 2002 reveals that older workers aged 55 to 64 saw the greatest relative increase in participation rates of any age group.<sup>37</sup>

28 Carliner, S., et al. "A Review of the State of the Field of Workplace Learning: What we Know and What we Need to Know about Competencies, Diversity, e-learning, and Human Performance Improvement," Review commissioned by the Canadian Council on Learning and the Work and Learning Knowledge Centre (Ottawa: Canadian Council on Learning, 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

29 Tamkin, Penny. *Measuring the Contribution of Skills to Business Performance: A Summary for Employers* (Brighton: Institute for Employment Studies, 2005).

30 The Conference Board of Canada. *Breaching the Barriers to Workplace Literacy* (Ottawa: 2001).

31 Turcotte, J., A. Léonard and C. Montmarquette. "New Evidence on the Determinants of Training in Canadian Business Locations," *The Evolving Workplace Series* (Ottawa: Statistics Canada and HRDC, 2005). Catalogue No. 71-584-MIE.

32 Tamkin, Penny. *Measuring the Contribution, 2005*.

33 Machin, Stephen and Anna Vignoles. *The Economic Benefits of Training to the Individual, the Firm and the Economy: The Key Issues* (London: Centre for the Economics of Education, 2001).

34 Baldwin, J. *Innovation and Training in New Firms*, Research Paper No. 123 (Ottawa: Statistics Canada, Analytical Studies Branch, 2000).

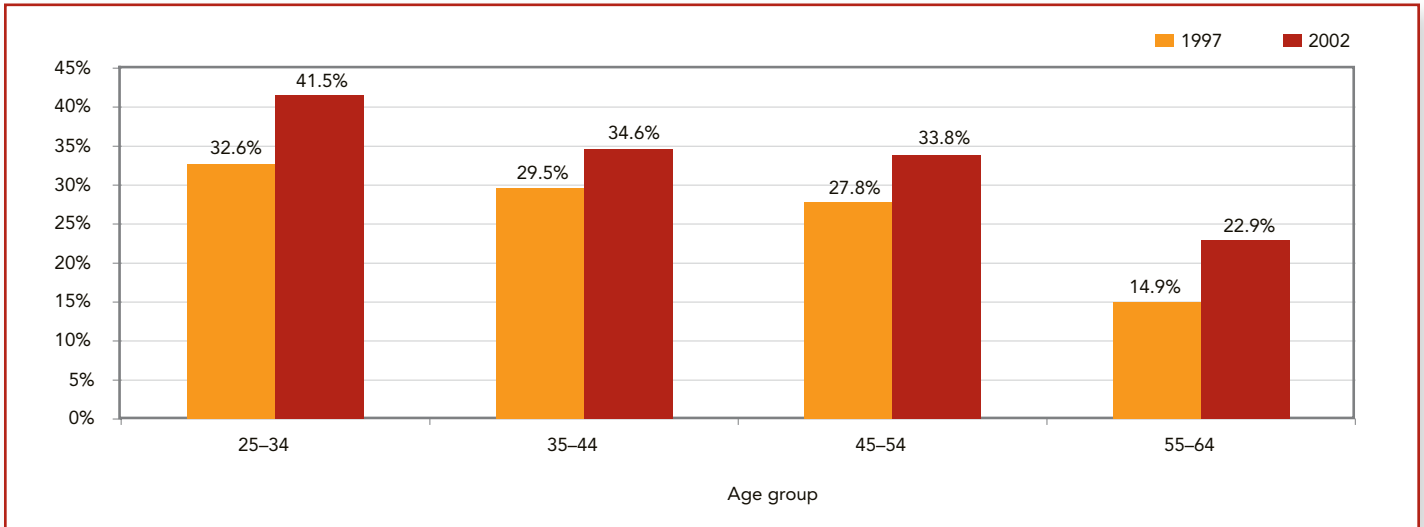
35 Peters, V. *Working and Training: First Results of the 2003 Adult Education and Training Survey* (Ottawa: Statistics Canada's Culture, Tourism and the Centre for Education Statistics Division, 2004). Catalogue No. 81-595-MIE.

36 *Ibid.*

37 *Ibid.*

# ADULT LEARNING

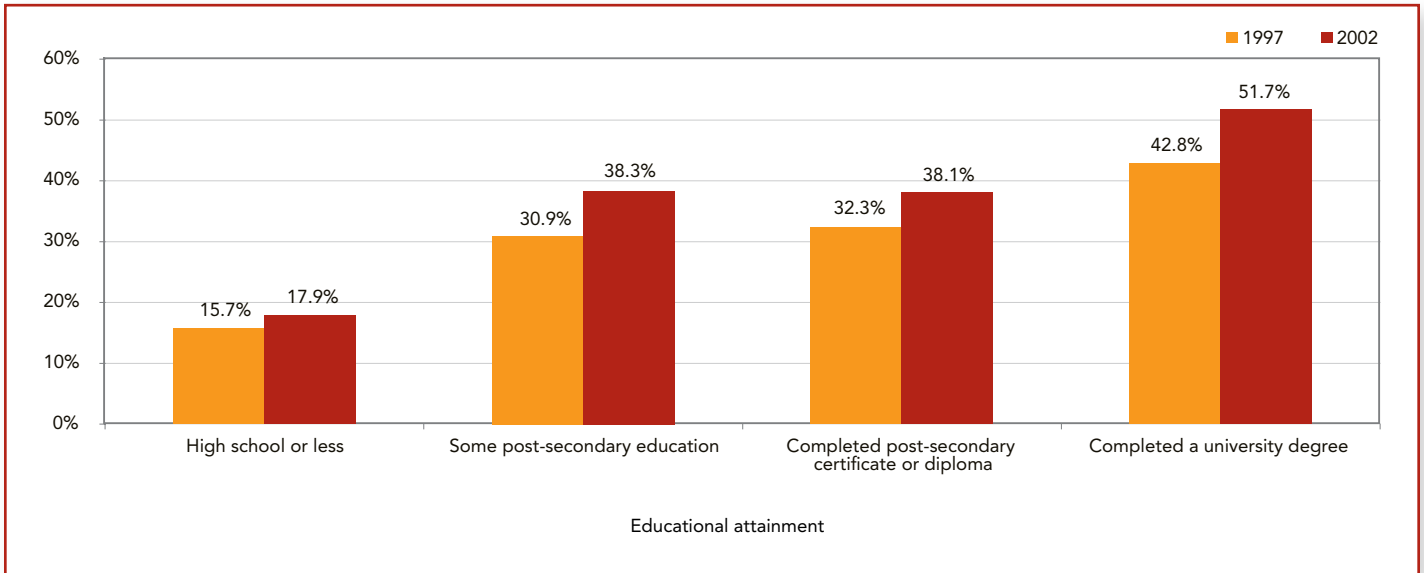
## Employed adults\* in formal job-related training, by age group, 1997 and 2002



\*The adult workforce is defined here as the population aged 25-64 who were employed at some point during the reference year.  
Source: Statistics Canada, Adult Education and Training Survey

There is a clear relationship between higher education and the increased likelihood of continuing to seek out formal work-related training. In 2002, more than half (52%) of workers with university degrees participated in formal training, compared to 18% of workers with a high school diploma or less.

## Employed adults\* in formal job-related training, by educational attainment, 1997 and 2002



\* The adult workforce is defined here as the population aged 25-64 who were employed at some point during the reference year.  
Source: Statistics Canada, Adult Education and Training Survey

### Informal work-related learning

Informal work-related learning tends to be self-directed and aims to refine a worker's abilities in areas such as computer skills or time management.<sup>38</sup> There are usually no specific rules about the organization, delivery or assessment of such training and it does not ordinarily lead to a certificate or other proof of qualification.

In 2002, one-third (33%) of Canada's workforce participated in informal work-related learning. As with more formal training, participation rates were higher among women, younger workers and those with higher levels of formal education.

### Employed adults in informal work-related learning, by gender, age group and educational attainment, 2002

CATEGORY	PERCENTAGE
Male	30.3%
Female	35.0%
Total	32.5%
25–34	37.9%
35–44	32.4%
45–54	31.7%
55–64	23.1%
High school or less	16.4%
Some post-secondary education	34.0%
Completed post-secondary certificate or diploma	35.4%
Completed a university degree	50.1%

Source: Statistics Canada, Adult Education and Training Survey, 2002

In some sectors, informal training is more effective than a structured approach to updating skills and knowledge. In the information technology industry, for instance, rapid changes mean many workers do best to learn on their own, rather than wait

for courses or programs. A 2005 study found that about 70% of information technology workers had recently participated in informal work-related training, mostly through independent study. Only 40% had participated in formal training during that period.<sup>39</sup>

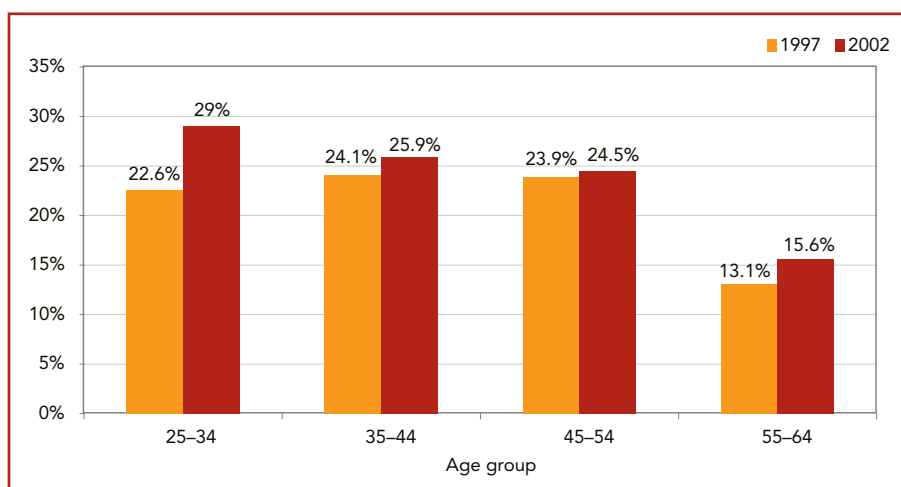
### Employer-supported training

Not every type of work-related learning is necessarily sponsored by the employer. Some employees advance their skills and knowledge on their own initiative and at their own expense.

In fact, according to Statistics Canada's definitions, employers are only considered to support adult worker training if they have provided or paid for training, allowed trainees to work flexible schedules in order to participate in training, or provided transportation to or from the training site.

In 2002, 25% of the adult workforce participated in employer-sponsored training. Between 1997 and 2002, there was little change in overall participation rates, except among 25- to 34-year-olds, whose participation in employer-sponsored training rose from 23% to 29%. Women (27%) were more likely to take part in employer-supported training than men (23%).<sup>40</sup>

### Participation rate of the adult workforce, by age, in employer-supported, formal job-related training, 1997 and 2002



Source: Peters, V. *Working and training*, 2004

However, of all employees who took any sort of formal work-related training, the proportion whose training was supported by their employers declined, from 79% in 1997 to 72% in 2002. This indicates that more workers in 2002 were taking training at their own initiative and expense.

When it comes to employer-supported training, firm size matters. Larger companies are far more likely than smaller organizations to offer structured training to their staff.

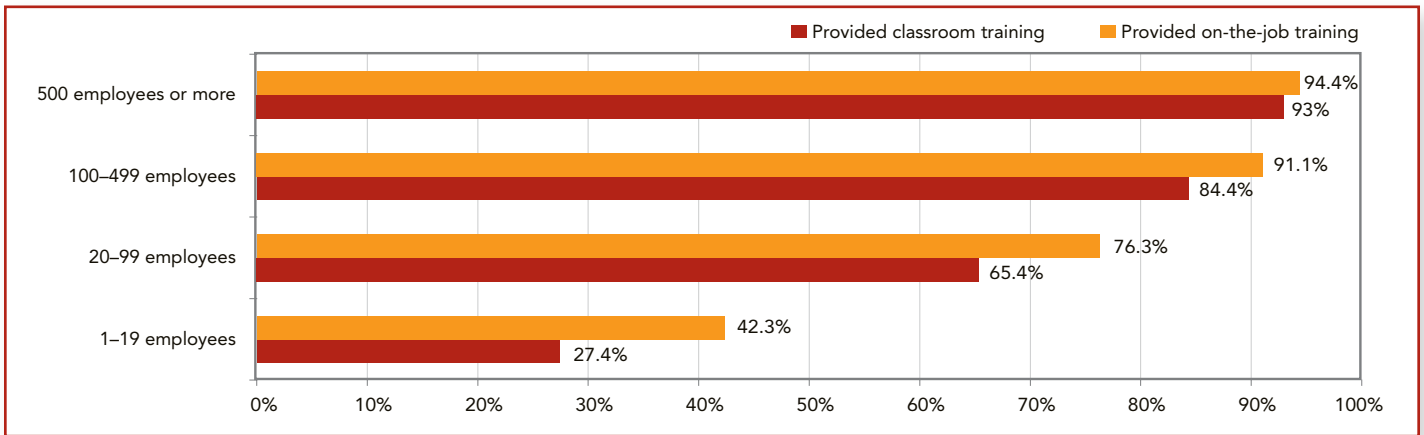
38 Ibid.

39 Gunderson, M., L. Jacobs, and F. Vaillancourt. *The Information Technology (IT) Labour Market in Canada: Results from the National Survey of IT Occupations* (Ottawa: Software Human Resource Council, 2005).

40 Peters, V. *Working and training*, 2004.

# ADULT LEARNING

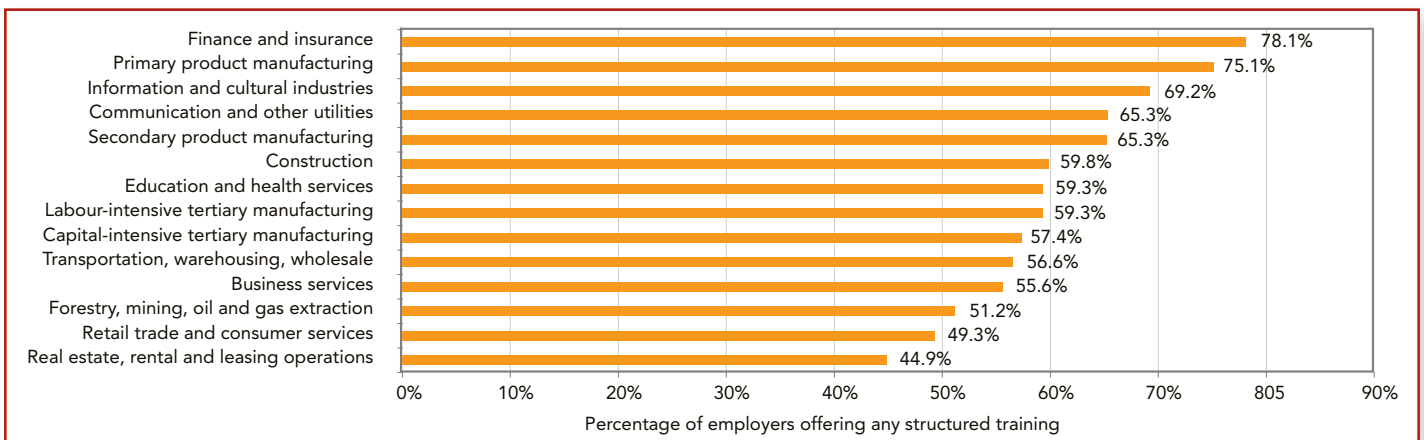
## Proportion of businesses providing training, by size, 2003



Source: Statistics Canada, Workplace and Employee Survey, 2003

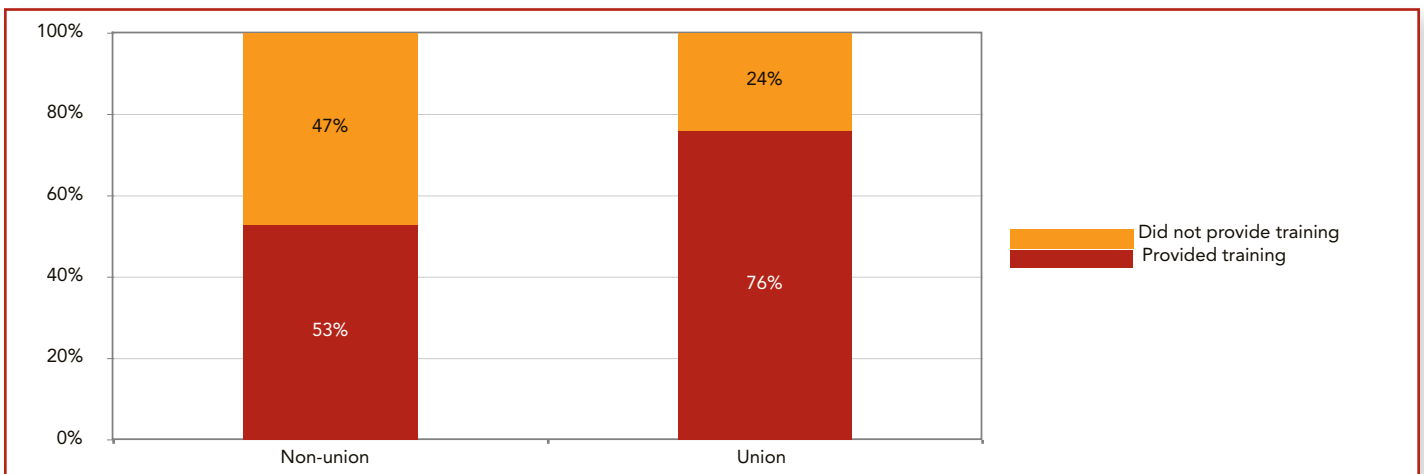
Workers most likely to receive structured training were in sectors such as finance and insurance, manufacturing, and information and cultural industries. The retail and real estate sectors were among the least likely to offer their workers training.

## Proportion of employers providing structured employee training, by industry, 2003



Source: Statistics Canada, Workplace and Employee Survey, 2003

## Employers offering job-related training, by union status



Source: Statistics Canada, Workplace and Employee Survey, 2003

Many unions promote work-related learning through courses, events and workshops. Some have highly developed training facilities. Others have joined with colleges to broaden the availability of programs to upgrade worker skills and credentials.<sup>41</sup> As a consequence, unionized businesses are more likely (76%) than non-unionized companies (53%) to support employee training.<sup>42</sup>

Internationally, Canada lags behind in employer-sponsored training. Businesses in the United Kingdom and Scandinavia were significantly more likely than those in Canada to invest in employee training in 2000, the last year for which comparable data were available.

**Proportion of firms offering employee training, by country, 1999**

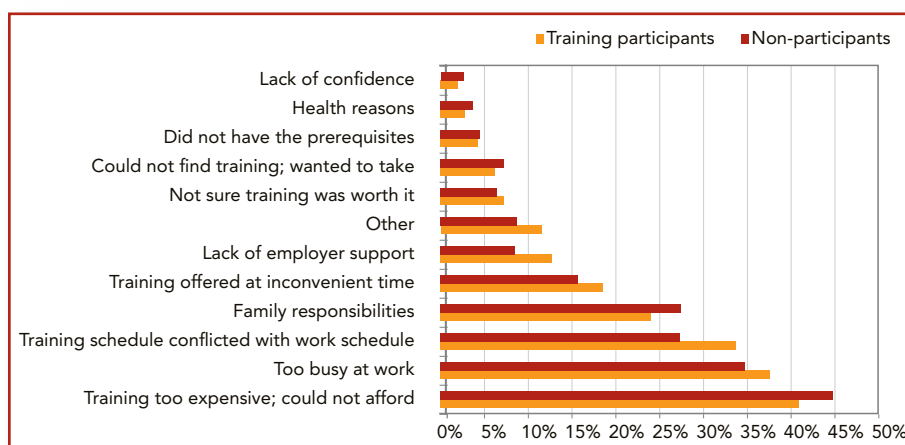
COUNTRY	FIRMS OFFERING TRAINING
Denmark	96%
Sweden	91%
United Kingdom	87%
Norway	86%
Finland	82%
Canada	56%
Spain	36%
Portugal	22%

Source: Canadian figure from Statistics Canada, Workplace and Employee Survey. All others, from EuroStat NewCronos Database, CVTS, as presented in OECD's *Beyond Rhetoric: Adult Learning Policies and Practices* (Paris: OECD, 2003)

*Barriers to work-related learning*

The most common barriers cited to participation in work-related learning include money, time and family responsibilities. These barriers are most frequently noted by women.<sup>43</sup> And although the barriers may be similar both for those who participate and those who do not, the implications for developing work-related training policies are different.

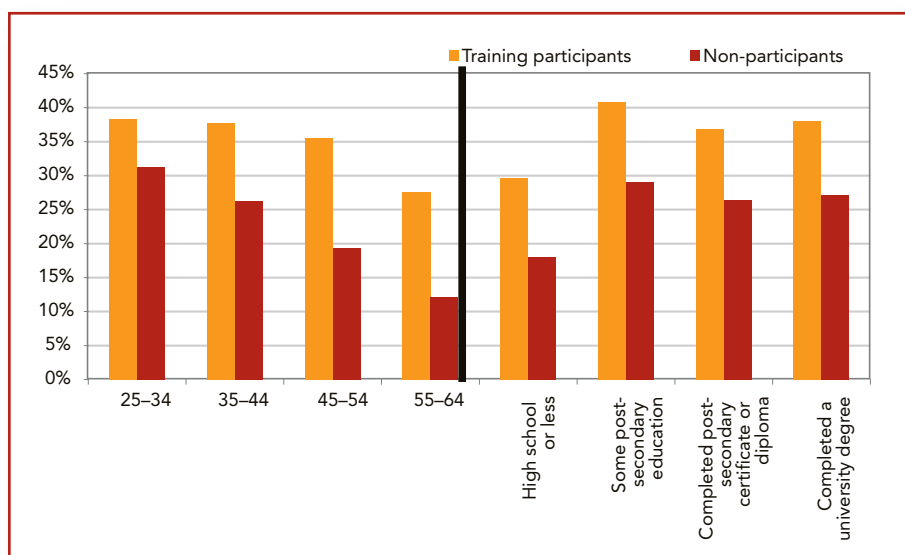
**Barriers to work-related training, training participants and non-participants, ages 25–64, 2002**



Source: Statistics Canada, *Adult Education and Training Survey*, 2002

Another barrier for some is *unrecognized learning*. Many people discover that the learning and experience they gained in earlier years cannot be properly measured and defined by credentials that are recognized by Canadian employers. This *learning recognition gap* stands in the way of many competent adults finding work that is commensurate with their skills and knowledge. It is also a problem for the country as whole, because it undermines Canada's ability to attract and maintain a world-class workforce.<sup>44</sup>

**Proportion of workers unable to access training, by age and educational attainment, 2002**



Source: Statistics Canada, *Adult Education and Training Survey*, 2002

Those with some post-secondary education reported difficulties in accessing training. Younger workers, aged 25 to 34, stated that they too experienced difficulties accessing training. With student debt rising and poorer job prospects for post-secondary non-completers, the likelihood of this group not receiving training increases.

41 Evans, N. *Making Sense of Lifelong Learning: Respecting the Needs of All* (London: Routledge Falmer, 2003).  
 42 Statistics Canada. *Workplace and Employee Survey* (Ottawa: 2003).  
 43 Peters, V. *Working and training*, 2004.  
 44 The Conference Board of Canada. *Brain Gain—The Economic Benefits of Recognizing Learning and Learning Credentials in Canada* (Ottawa: 2001).

## 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. For most Canadians, the transition is a phase that includes time spent in high school or post-secondary education, periods of temporary or part-time work, settling into a career, or returning to further studies. The routes taken by students are not only shaped by educational systems and students' own experiences, but also by parents, governments and employers.<sup>45</sup>

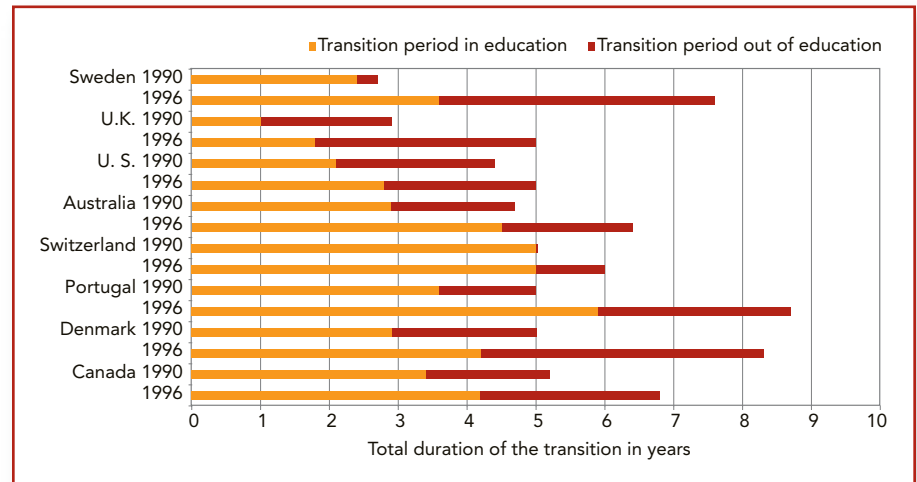
This transition from initial education to working life occurs within a social, economic and educational context, and can result in a number of different outcomes, including attainment of educational qualifications or obtaining employment.<sup>46</sup> The OECD uses 14 indicators to measure the school-to-work transition by examining employment rates for youth, literacy skills, and secondary and post-secondary graduation rates.<sup>47</sup>

However, the transition process, which comprises 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, 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.

In 1996, the most recent year for which internationally comparable data exist, the school-to-work transition period in Canada averaged 6.8 years. This was

shorter than the OECD average of 7.4 years, but longer than the Canadian average of 5.2 years in 1990. The average transition period in Canada lengthened between 1990 and 1996 because students were spending more time in school, obtaining the advanced skills and qualifications demanded by the modern workplace.<sup>48</sup> Others were taking longer to find a first job. In addition, more students were opting to travel or study abroad, which can contribute significantly to personal development.<sup>49</sup>

## School-to-work transitions, international comparisons, 1990 and 1996



Source: OECD. *From Initial to Working Life: Making Transitions Work*, 2000

Note: Countries are ranked in order of the total duration of the transition in 1990

There are various factors that are increasing average school-to-work transition periods in Canada, and across all OECD countries. These include a rising demand for increased skills and qualifications, labour-market conditions, societal attitudes toward the appropriate age for independence and, in some cases, the pursuit of travel or studying abroad.<sup>50</sup> Longer average school-to-work transition periods should not necessarily be viewed negatively, for a number of reasons. A better-educated workforce requires more time spent in studies. In addition, activities such as travel may also positively contribute to personal development.<sup>51</sup>

School-to-work transitions can also be examined by looking at the results of graduate outcome surveys. Data from the National Graduate Survey can be used to demonstrate the labour-market outcomes of graduates of post-secondary programs two years after graduating. The survey has been undertaken with different graduates in 1986, 1990, 1995, and 2000.

Labour outcomes in terms of proportion of graduates working full or part-time, looking for work, or being outside the labour force, did not demonstrate significant changes over the decade and a half. Both college and university graduates secured more ready access to the labour market after completing post-secondary programs.<sup>52</sup> Post-secondary graduates are also more likely to report having full-time employment two years after graduation.

<sup>45</sup> OECD. *From Initial Education to Working Life—Making Transitions Work* (Paris: 2000).

<sup>46</sup> *Ibid.*

<sup>47</sup> *Ibid.*

<sup>48</sup> *Ibid.*

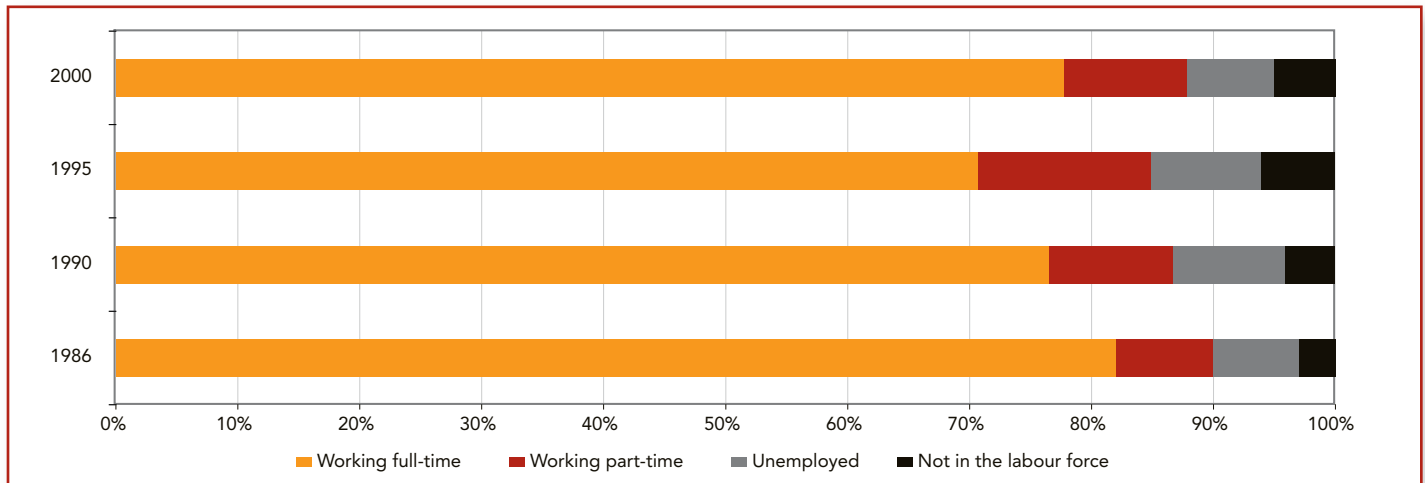
<sup>49</sup> *Ibid.*

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*

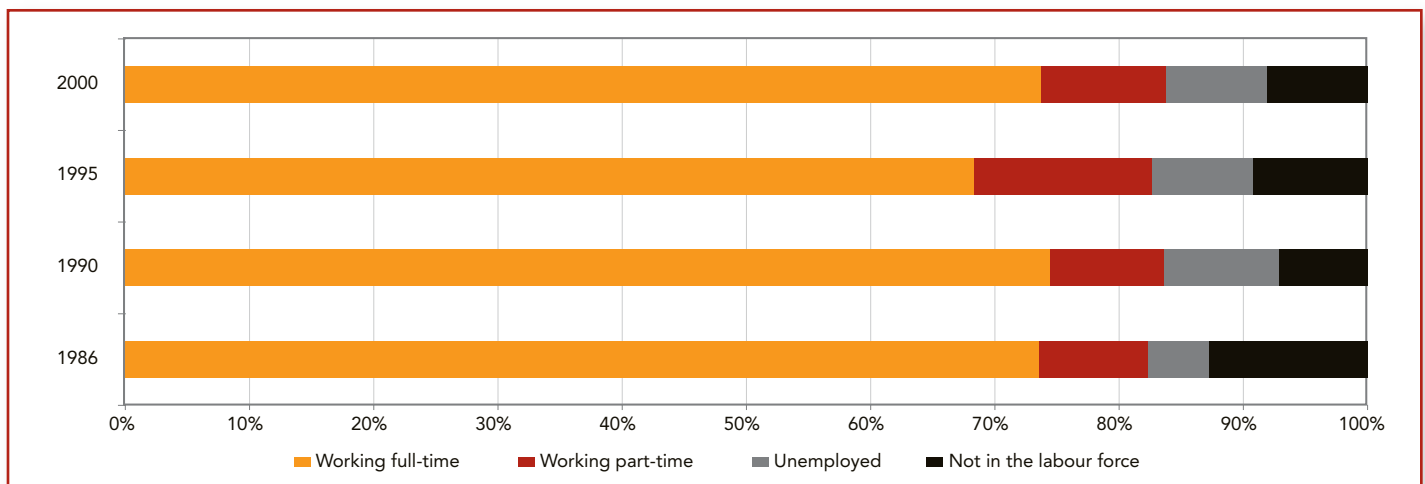
<sup>52</sup> Junor, S., and A. Usher. "Price of Knowledge: Access and Student Finance in Canada," *Millennium Research Series* (Montreal: Millennium Scholarship Foundation, 2004).

### Employment status of college students two years after graduation



Source: Junor, S., and A. Usher. "Price of Knowledge: Access and Student Finance in Canada," *Millennium Research Series* (Montreal: Millennium Scholarship Foundation, 2004)

### Employment status of university students two years after graduation



Source: Junor, S., and A. Usher. "Price of Knowledge: Access and Student Finance in Canada," *Millennium Research Series* (Montreal: Millennium Scholarship Foundation, 2004)

## LEARNING FOR PERSONAL DEVELOPMENT, AT HOME AND IN THE COMMUNITY

Many adults engage in learning activities beyond their initial education. These learning activities occur across a variety of different contexts that may include participation in interest courses, using the internet to gain useful information or volunteer work in the community.

Anecdotally, we know that such forms of adult learning are widespread and important for personal growth and satisfaction. Community activities broaden personal knowledge and promote teamwork—a benefit to both

the individual and the community—and many of the skills acquired through personal learning activities are also applicable to the professional lives of individuals.<sup>53</sup>

But as much as the effects of informal learning are clear, they are difficult to measure. There is still much about these types of informal learning that is not well understood by researchers and efforts to develop appropriate indicators are ongoing.<sup>54,55,56</sup>

53 Canadian Council on Learning. *Composite Learning Index* (Ottawa: 2006). Available at [www.ccl-cca.ca/cli](http://www.ccl-cca.ca/cli).

54 Livingston, D. W., and R. Roth. *Workers' Knowledge: An Untapped Resource in the Labour Movement*, presented at the International Conference on Union Growth, Centre for the Study of Education and Work Ontario Institute for Studies in Education /University of Toronto (Toronto: April 30–May 1, 2001).

55 Livingston, D. W. *Adults' Informal Learning: Definitions, Findings, Gaps, and Future Research*, NALL Working Paper # 21 (Toronto: The Research Network on New Approaches to Lifelong Learning, 2001).

56 Livingston, D. W. *Mapping the Iceberg*, NALL Working Paper # 54 (Toronto: The Research Network on New Approaches to Lifelong Learning, 2002).

# ADULT LEARNING

## What do we know about Canada's progress?

### Volunteering

Volunteers are vital to the life of a community, helping to strengthen services for children, seniors and people in need. For their part, volunteers acquire new skills, rise to new challenges and widen their social networks.<sup>57</sup>

Statistics Canada's *Survey of Giving, Volunteering and Participating* measures the extent to which Canadians engage in unpaid activities as part of a group or organization, and how engaged they are in the community.

In 2004, 45% of Canadians aged 15 years and older volunteered their time. These 11.8 million people donated nearly 2 billion hours—the equivalent of 1 million full-time jobs. The volunteer rate, averaging 168 hours per person, was highest among younger Canadians (55%), people with university degrees (59%), people with jobs (50%), and those who were living in households with incomes of \$100,000 or more (60%). While younger people and those with higher incomes were more likely to become volunteers, seniors and people with lower incomes actually put in the greatest number of volunteer hours.<sup>58</sup>

### Volunteer rate by personal and economic characteristics, ages 15 and older, 2004

CATEGORY	PERCENTAGE (2004)
15–24	55%
25–34	42%
35–44	51%
45–54	47%
55–64	42%
65 and older	32%
Less than high school	37%
Graduated from high school	42%
Some post-secondary	50%
Post-secondary diploma	47%
University degree	59%
Employed	50%
Unemployed	42%
Not in the labour force	43%
Less than \$20,000	30%
\$20,000–\$39,999	37%
\$40,000–\$59,999	45%
\$60,000–\$79,999	48%
\$80,000–\$99,999	51%
\$100,000 or more	60%

Source: Statistics Canada. *Canada Survey of Giving, Volunteering and Participating*, 2004

### Participation in clubs and organizations

Canadians join clubs, community organizations and associations for a variety of reasons, including personal learning, growth, networking and companionship. These organizations, in turn, gain dedicated teams of people, working together toward specific projects and goals.<sup>59</sup> The most common types of voluntary organizations are sports and recreation groups, professional associations and unions, religious organizations, and cultural, educational or hobby groups.

In 2004, two-thirds (66%) of Canadians 15 years of age or older belonged to at least one formal voluntary group. Participation rates were highest among people who were between 45 and 54 years old (69%), had a university degree (82%), a job (71%), and a household income of \$100,000 or more (80%).<sup>60</sup>

### Participation in voluntary organizations, by personal and economic characteristics, ages 15 and older, 2004

CATEGORY	PERCENTAGE (2004)
15–24	65%
25–34	66%
35–44	68%
45–54	69%
55–64	65%
65 and older	59%
Less than high school	51%
Graduated from high school	59%
Some post-secondary	64%
Post-secondary diploma	70%
University degree	82%
Employed	71%
Unemployed	62%
Not in the labour force	58%
Less than \$20,000	47%
\$20,000–\$39,999	56%
\$40,000–\$59,999	64%
\$60,000–\$79,999	71%
\$80,000–\$99,999	74%
\$100,000 or more	80%

Source: Statistics Canada. *Canada Survey of Giving, Volunteering and Participating*, 2004

57 Canadian Council on Learning. *Composite Learning Index*, 2006.

58 Statistics Canada. *Caring Canadians, Involved Canadians—Highlights from the 2004 Canada Survey of Giving, Volunteering and Participating* (Ottawa: 2006). Catalogue No. 71-542-XIE.

59 Canadian Council on Learning. *Composite Learning Index*, 2006.

60 Statistics Canada. *Caring Canadians*, 2006.



### Internet use

Canadian adults use the internet for a variety of purposes, including exchanging e-mail, making travel arrangements, and updating themselves on the news, weather and sports highlights. Increasingly, Canadians are also using the internet to search for information on health, government services and data, and consumer warnings and advice. As well, some individuals are using the internet to search for employment in both the public and the private sectors.

Computers and information technology are also allowing Canadians to engage in e-learning, or distance education. This opens new opportunities for lifelong learning for all adults, but it is of particular benefit to people with learning challenges, including the disabled, recent immigrants, or people living in geographically isolated areas.<sup>61</sup>

### Use of the internet by adults, 2005

	PERCENTAGE (2005)
E-mail	91%
Travel information/arrangements	63%
News/sports	62%
Health-related information	58%
Electronic banking	58%
Paying bills	55%
Information on Canadian governments	52%
Education, training or school work	43%
Playing games	39%
Researching investments	26%
Listening to internet radio	26%

Source: Canadian Internet Use Survey, 2005

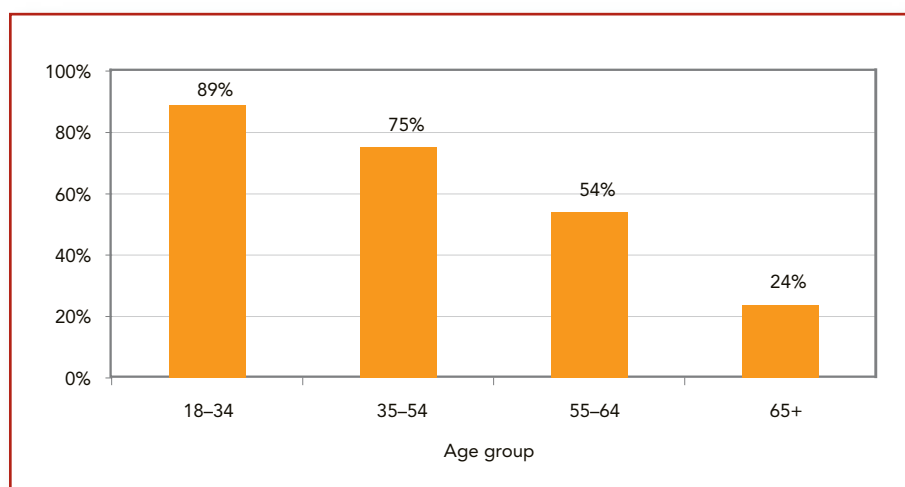
The 2005 Canadian Internet Use Survey shows that more than two-thirds (68%) of Canadian adults—16.8 million people—had used the internet for personal activities over the previous year, and most of them used it daily.

Internet access rises with educational level: 80% of adults with at least some post-secondary education used the internet in the year prior to the survey, compared with just half (49%) of adults with only a high-school education.<sup>62</sup>

Younger adults also reported the highest rates of internet use. Most (89%) of 18- to 34-year-olds were internet users, as were Canadians aged 35 to 54 (75%). By contrast, just over half (54%) of adults aged 55 to 64 used the internet.<sup>63</sup>

Older Canadians are also actively engaged with information and communication technologies. The Canadian Internet Use Survey revealed that 54% of the Canadian adults aged 55 to 64 years used the internet; and 59% of those accessed it daily. Furthermore, even older Canadians are using the internet more frequently, with 24% of the population aged 65 and older reporting its use and 63% of those accessing it daily.<sup>64</sup>

### Proportion of internet users, by age group, 2005



Source: Statistics Canada, *Canadian Internet Use Survey, 2005*

Computer and internet usage is also strongly associated with improved literacy skill and higher earnings.<sup>65</sup> This is an important finding, given that those most in need of skills upgrading are not using computers or the internet and could potentially benefit from new opportunities created by technological avenues.

61 Tuijnman, A. "Themes and questions for a research agenda on lifelong learning," *Supporting Lifelong Learning Vol. 3 Making Policy Work* (London: Open University, 2002).

62 Statistics Canada. *The Canadian Internet Use Survey* (Ottawa: 2005).

63 *Ibid.*

64 *Ibid.*

65 Statistics Canada. *Adult Literacy and Life Skills Survey* (Ottawa: 2003).

# ADULT LEARNING

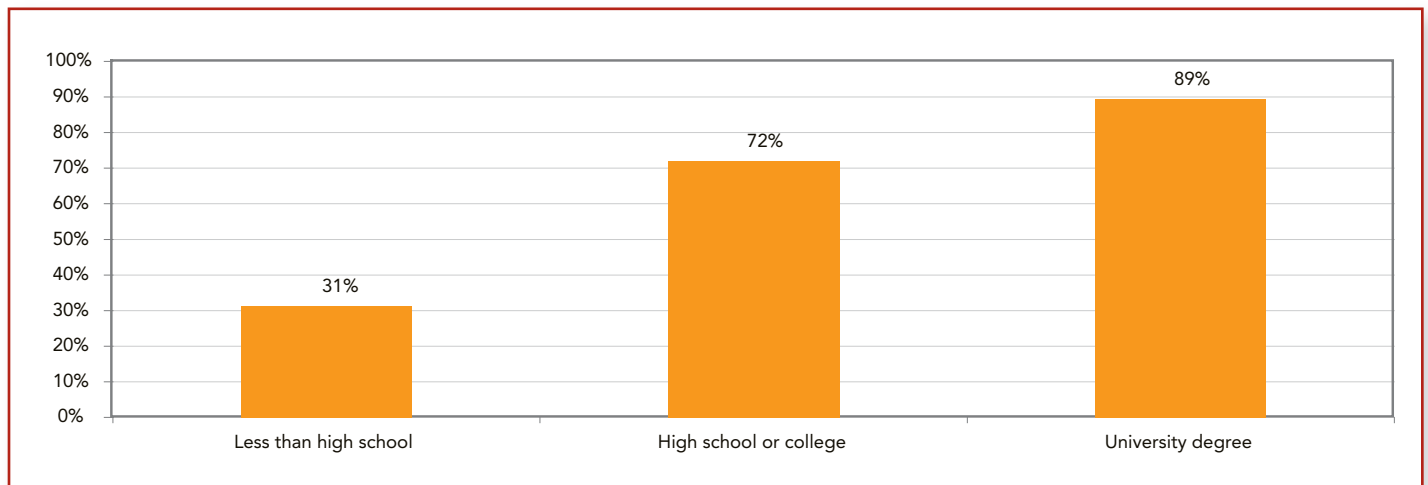
## SENIORS AND LEARNING

Learning has a number of benefits for seniors. Research has shown that good mental health can be maintained with intellectual stimulation through formal education, leisure activities and professional pursuits. Also, engaging in learning allows seniors to stay involved in their communities and to develop new interests. In sum, learning helps to foster a healthy and happy life for older Canadians.

There are, however, a number of barriers that seniors commonly encounter when trying to take up learning activities:

- fewer learning opportunities are available to seniors than to their younger counterparts
- on average, seniors have lower literacy skills and less prior education
- seniors suffer from higher rates of illness and disability
- some seniors experience declining cognitive skills<sup>66</sup>

### Proportion of internet users, by educational attainment, 2005



Source: Statistics Canada, *Canadian Internet Use Survey*, 2005

## 4.3 The Road Ahead

### WHERE DOES CANADA STAND?

Adult learning offers a wide range of benefits. In addition to better job opportunities and higher incomes, continued learning throughout life facilitates better health and greater civic engagement and personal fulfilment.

As evidenced by the comparatively high literacy skills of 15-year-olds (see Chapter 2) and the weaker performance of adults in literacy assessments, learning does not extend into adulthood for many Canadians. There has been little progress in adult literacy performance in Canada in the past decade, and 42% of Canadian adults do not have sufficient literacy to succeed in today's knowledge-based economy.

However, several alarming trends further underscore society's need to refocus on adult learning.

For one thing, adult literacy skills have shown little improvement over the past decade. And the situation will not improve on its own given that literacy skills generally decline with age and Canada has an aging population. Moreover, Canada's high immigration rate brings in a growing number of people without the literacy skills necessary to integrate successfully into the Canadian labour market.

Canada's performance in adult literacy falls behind that of many other countries. As well, Canada lags behind other countries in terms of providing solutions. Many Canadian workers are not getting the work-related training they need. And those in greatest need—recent immigrants, people with low literacy skills, those who have dropped out of formal education, and older workers in need of skills upgrading—are least likely to get further training.

Lastly, the extent to which individuals volunteer or participate in their communities also has important implications for learning. While many Canadians are participating in community activities and personal development, there are many groups demonstrating low levels of involvement, including those with lower levels of income and education.

### WHAT WE DON'T KNOW

Despite the availability of information on adult learning, there are many unanswered questions and substantial gaps in our data. Where data do exist, they are often not yet analysed in a way that sheds meaningful light on the status of adult learning, the challenges and potential solutions.

Currently, for instance, we do not understand why literacy scores decline with age. We don't know how to mitigate the impact of low health literacy on vulnerable populations, including seniors, or how to raise their literacy skills.

While there are pan-Canadian data on the nature and extent of work-related learning, we know little about the outcomes of that learning. For example, is there adequate information on the return on training investment for employees and employers, or the impact of learning on workplace performance, employee skills and competencies, and corporate productivity?

Similarly, with better information we could more accurately assess the need for skills among employees, employers and entire industries and sectors.

We could also explore factors that influence access to work-related learning, as well as incentives and strategies to support learning—especially for non-traditional or non-standard types of work and among vulnerable groups, such as immigrants.

Indeed, while many Canadian workers receive work-related training, many do not. A closer look might help us understand the barriers that these people face.

There are also gaps in what we know in terms of school-to-work transitions. These include the ability to measure the complexity of the school-to-work transition, and the scope of career education and counselling available to young people.

Informal work-related learning is also an area where we need to learn more. There is little pan-Canadian information on who engages in informal training, how and why they do it, what type of practices take place, how much informal learning takes place and the impact of informal learning both on employees and on their workplace.

And finally, there is a shortage of data on the social impact of adult learning. It is widely believed, for instance, that adult learning helps promote active citizenship, but we need more information to understand its effects on the everyday lives of Canadians.

## WHAT WILL CCL DO?

Lifelong learning is a fundamental priority for the Canadian Council of Learning. In addition to Aboriginal learning, which is discussed in the next chapter, CCL has established three knowledge centres focussed on key aspects of adult learning.

### Adult learning

The Adult Learning Knowledge Centre is mandated to foster a rich, informed and coordinated culture of adult learning, one that is responsive to the needs and interests of all Canadians. Working with government, educational institutes and community organizations, the Adult Learning Knowledge Centre seeks to develop coordinated adult learning systems across Canada and a better understanding among all Canadians of the role of lifelong learning in creating economic productivity, social equity and civic engagement.

The Adult Learning Knowledge Centre has identified four key priorities for the upcoming year: developing a right-to-learn strategy for Canadians with learning needs related to literacy, high-school completion and prior learning recognition; building action research capacities among adult learning practitioners; raising the profile of adult learning; and developing benchmarks for monitoring progress in adult learning activities.

Since its launch in September 2005, the Adult Learning Knowledge Centre has undertaken many initiatives, including two national calls for knowledge exchange projects, several workshops for adult learning researchers and practitioners, a national symposium, a pan-Canadian series of roundtable events towards policy development, a speaker series for the general public and research projects on adult learning.

### Work and learning

A knowledge centre was created to advance the state of knowledge and practice in the area of work-related learning. The Work and Learning Knowledge Centre has three key areas of interest:

- optimizing the level, quality and effectiveness of work-related learning
- improving transitions between formal learning and work
- improving access to work-related learning for immigrants and other vulnerable groups

### Health and learning

The Health and Learning Knowledge Centre, a 17-member consortium, serves as a pan-Canadian network of expertise on the link between learning and the health of Canadians. The centre is particularly interested in health literacy and ensures it is considered in all the work the centre performs or sponsors.

One of the key projects currently underway is an Expert Panel on Health Literacy. Organized early in 2006 by the Canadian Public Health Association, the 13-member panel will advise on the state of knowledge on health literacy and the effectiveness of interventions to improve it. The panel, which is also working with the federal Public Health Agency's Collaborating Centre on Determinants of Health, will also generate recommendations on future research, policy and programming initiatives in health literacy.

Another knowledge centre project, led by the British Columbia Academic Health Council, aims to build health literacy among health professionals. Other projects focus on young people in or out of school, and youth engagement.

# ABORIGINAL LEARNING

## 5.1 Introduction

*For more than 25 years, Aboriginal people have been articulating their goals for Aboriginal education. They want education to prepare them to participate fully in the economic life of their communities and in Canadian society. But this is only part of their vision ... Youth that emerge from school must be grounded in a strong, positive Aboriginal identity. Consistent with Aboriginal traditions, education must develop the whole child, intellectually, spiritually, emotionally and physically.*

—1996 Report of the Royal Commission on Aboriginal Peoples<sup>1</sup>

Aboriginal Peoples have traditionally regarded lifelong learning as a means to develop the whole person, including the spiritual, intellectual, emotional and physical aspects of being.<sup>2</sup> In addition to personal enhancement, Aboriginal people see learning as a way to attain collective and community goals.<sup>3</sup> As such, learning develops the skills and knowledge needed for economic success and deepens an appreciation for Aboriginal traditions, cultures and languages. The Royal Commission on Aboriginal Peoples observed that education is “the transmission of cultural DNA from one generation to the next” and is key to a prosperous future.<sup>4</sup>

Given the multitude of Aboriginal cultures and contexts, this chapter does not reflect the full complexity of Aboriginal learning in Canada. Rather, it is intended to provide an introduction to Aboriginal learning and present the context for future research. It also discusses the need to broaden our definition for measures of success in Aboriginal learning and presents a context for future research.

### DEMOGRAPHICS

Aboriginal Peoples in Canada encompass First Nations, Métis and Inuit populations.<sup>5</sup>

First Nations peoples have unique relationships with Canada deriving from treaties or pre-existing Aboriginal rights. Collectively organized through local First Nations governments, First Nations include status and non-status Indians living on or off reserves.

The Métis are self-identified peoples of mixed Aboriginal and European ancestry who are associated with recognized settlements located primarily in the Prairies.

Inuit are Aboriginal Peoples living predominantly in the four Northern land-claim areas of Nunavik (northern Quebec), Nunatsiavut (Newfoundland and Labrador), Inuvialuit (Northwest Territories) and Nunavut.

In the 2001 census, almost 1 million (976,305) people identified themselves as Aboriginal, representing 3% of the Canadian population.<sup>6</sup> Of those, 62% identified themselves as First Nations, 30% as Métis, and 5% as Inuit. Approximately 3% of Aboriginal people reported more than one Aboriginal identity.

The Aboriginal population is young and growing in numbers. In 2001, six of 10 Aboriginal people were under the age of 29.<sup>7</sup> Inuit have the youngest population—nearly half (49%) were under the age of 20 in 2001.<sup>8</sup>

By 2017, the Aboriginal population is expected to exceed 1.4 million people, or 4% of the Canadian population.<sup>9</sup>

1 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3, Chapter 5 (Ottawa: 1996). Available at [www.ainc-inac.gc.ca](http://www.ainc-inac.gc.ca). Accessed on Nov. 29, 2006.

2 Battiste, Marie. “State of Aboriginal Learning,” Background Paper for the National Dialogue on Aboriginal Learning (Ottawa: Canadian Council on Learning, Nov. 13–14, 2005).

3 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3.

4 *Ibid.*

5 As defined by Section 35 of the Constitution Act (Ottawa: Justice Canada, 1982). Available at Constitution Acts 1867 to 1982.

6 Statistics Canada. *Aboriginal Identity (8), Age Groups (11B), Sex (3) and Area of Residence (7) for Population, for Canada, Provinces and Territories, 2001 Census - 20% Sample Data (table). Topic-based Tabulations: Aboriginal Peoples of Canada* (Ottawa: 2003). Statistics Canada Catalogue No. 97F0011XCB2001001.

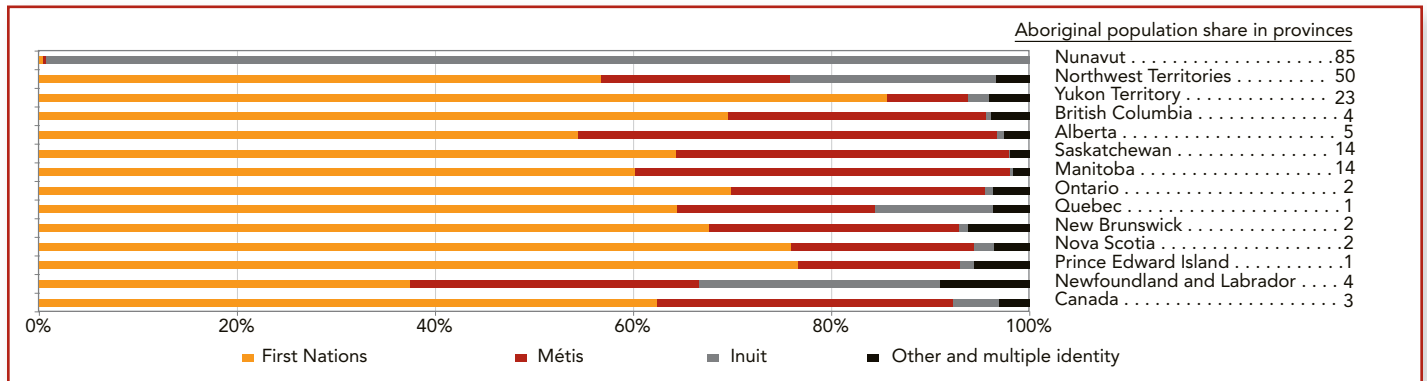
7 *Ibid.*

8 *Ibid.*

9 According to medium growth scenarios in: Statistics Canada. *Projections of the Aboriginal populations, Canada, provinces and territories: 2001 to 2017* (Ottawa: 2005). Catalogue No. 91-547-XWE. Available at [www.statcan.ca](http://www.statcan.ca). Accessed Nov. 27, 2006.

# ABORIGINAL LEARNING

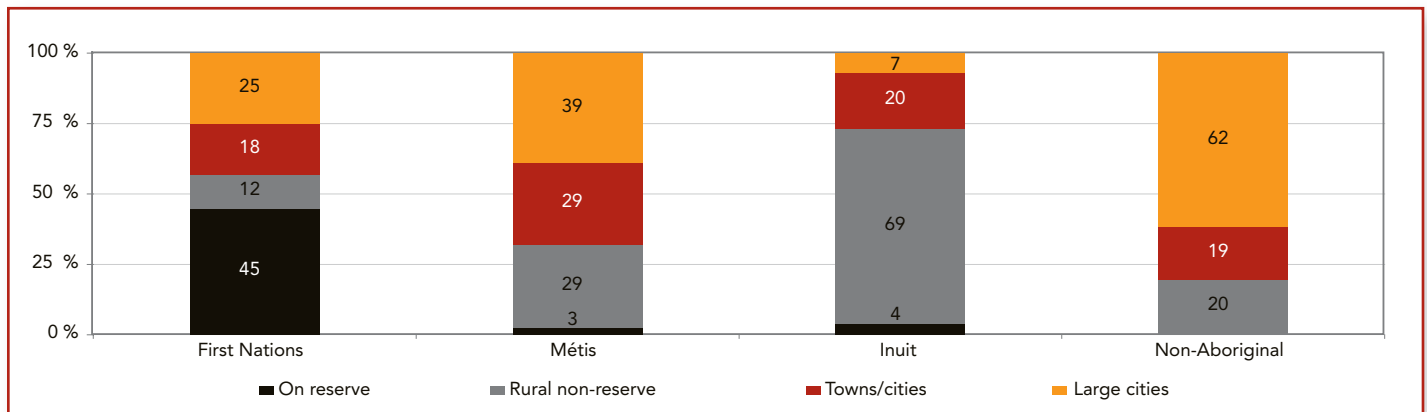
## Aboriginal populations, by province and territory, 2001



Source: Statistics Canada, Census 2001

Almost half (45%) of First Nations people live on reserves, while the majority of Inuit (69%) live in rural areas. Métis are distributed more evenly among large cities (39%), towns and small cities (29%), and rural areas (29%). Canada's non-Aboriginal population, by contrast, is concentrated in large cities (62%) and towns and small cities (19%).

## Aboriginal and non-Aboriginal areas of residence, 2001



Source: Statistics Canada, Census 2001

## KEY CHALLENGES

Aboriginal people face economic, health and social challenges that inhibit their opportunities for lifelong learning. Unemployment, poverty and unsuitable living conditions, for example, are common barriers to success in learning.

Poor economic and living conditions also contribute to comparatively poor health. Diabetes among Aboriginal people, for instance, occurs at rates three to five times higher than in the general Canadian population.<sup>10</sup> Suicides and substance abuse rates are also higher among Aboriginal populations.<sup>11</sup>

<sup>10</sup> Health Canada. Aboriginal Diabetes Initiative website. Available at [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca). Accessed Nov. 8, 2006.

<sup>11</sup> Accurately calculating suicide rates among Aboriginal people is problematic, as the cause of death is often not known. Using the available data, suicide rates across all age groups of Aboriginal people have been estimated to be about three times higher than in the non-Aboriginal population. Source: *Suicide Among Aboriginal People: Royal Commission Report* (Ottawa: Parliamentary Research Branch, Feb. 23, 1995).

### ABORIGINAL POVERTY

- The median income of Aboriginal people was \$13,525 in 2001, compared to \$22,431 for non-Aboriginal Canadians.<sup>12</sup>
- In every province, Aboriginal unemployment rates exceeded the jobless rate of the population as a whole. In Manitoba and Saskatchewan, Aboriginal unemployment rates were more than triple the overall rate.<sup>13</sup>
- Four in 10 Aboriginal children aged 14 years or younger (41%) were living in low-income families. In Manitoba and Saskatchewan, the proportion was more than 50%.<sup>14</sup>
- On First Nations reserves, 28% of the population live in overcrowded or substandard housing. Off reserves, 24% of Aboriginal households live in homes that fall below acceptable standards.<sup>15</sup>

Aboriginal leaders have also pointed to systemic impediments to lifelong learning. The non-Aboriginal educational systems, for example, often lack a capacity to teach Aboriginal culture, languages, traditions, values and approaches to learning.<sup>16</sup>

Many reports on Aboriginal learning have described racism and discrimination in the learning experiences

of Aboriginal people.<sup>17</sup> This has prompted a distrust of the non-Aboriginal education sector among many Aboriginal people and has hampered the progress of some Aboriginal students.

Despite the many challenges Aboriginal people face engaging in lifelong learning, they have made significant progress in recent decades.

### THE LEGACY OF RESIDENTIAL SCHOOLS

The Government of Canada amended the Indian Act in 1911 to make school attendance mandatory for every Indian child between the ages of seven and 15. By 1930, this had led to the creation of more than 80 residential schools.<sup>18</sup> While most residential schools closed by the mid-1970s, the last such facility operated until 1996.

Although it was not the experience of all students, many children were separated from their families and communities, and suffered from sexual, physical, and mental abuse while attending residential schools.<sup>19</sup> The 1996 Royal Commission on Aboriginal Peoples concluded that many of the current challenges facing Aboriginal communities, including violence, alcoholism, and loss of identity, spirituality and language, can be tied to the residential school experience.<sup>20</sup>

An estimated 80,000 Aboriginal people alive today attended residential schools.<sup>21</sup> In 2002, approximately one in three First Nations youth (aged 12 to 17) and one in six First Nations children (aged 11 and under) had one or more parents who attended a residential school.<sup>22</sup>

12 Statistics Canada. Census 2001.

13 *Ibid.*

14 *Ibid.*

15 Canada Mortgage and Housing Corporation. "Revised Aboriginal Households," 2001 Census Housing Series, Issue 6. Research Highlights Socio-Economic Series 04-036 (Ottawa: Canada Mortgage and Housing Corporation, 2004).

16 Battiste, Marie. *Aboriginal Learning*, 2005.

17 See, for example, the Royal Commission on Aboriginal Peoples and the Minister's National Working Group on Education. *Our Children—Keepers of the Sacred Knowledge* (Ottawa: Indian Affairs and Northern Development Canada, 2002).

18 Battiste, Marie and Sheelagh McLean. *State of First Nations Learning* (Ottawa: Canadian Council on Learning, Sept. 15, 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Nov. 29, 2006.

19 Assembly of First Nations. *Indian Control of Indian Education*, Policy Paper presented to the Minister of Indian Affairs and Northern Development (Ottawa: 1972).

20 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples* (Ottawa: Canada communication Group, 1996). Available at [www.ainc-inac.gc.ca](http://www.ainc-inac.gc.ca). Accessed Nov. 27, 2006.

21 Indian Residential Schools Resolution Canada website.

22 First Nations Centre. *First Nations Regional Longitudinal Health Survey (RHS) 2002/03* (Ottawa: 2005). Available at [www.naho.ca](http://www.naho.ca). Accessed Nov. 27, 2006.

# ABORIGINAL LEARNING

## 5.2 Indicators of Aboriginal learning

The following indicators are used in this chapter to explore the state of Aboriginal learning, from early childhood and school age through adulthood. The indicators were selected on the basis of available pan-Canadian data sources, although regional and community data developed by Aboriginal organizations are also presented.

INDICATORS OF ABORIGINAL LEARNING	
Aboriginal languages and cultures	<ul style="list-style-type: none"> <li>• Knowledge of Aboriginal languages</li> <li>• Bilingual and immersion programming</li> </ul>
Early development and learning	<ul style="list-style-type: none"> <li>• Aboriginal child health and living conditions</li> <li>• Early childhood learning programs</li> </ul>
School-based learning	<ul style="list-style-type: none"> <li>• High-school attainment</li> </ul>
Post-secondary education and skills training	<ul style="list-style-type: none"> <li>• Post-secondary participation</li> <li>• College or vocational training</li> <li>• University completion</li> <li>• Adult literacy</li> </ul>
Community-based education	<ul style="list-style-type: none"> <li>• Aboriginal governance over learning</li> <li>• Family engagement</li> </ul>

### ABORIGINAL LANGUAGES AND CULTURES

*Elders contend that language and culture cannot be taught from a blackboard. First Nations students must be immersed in their culture in order for them to truly develop a clear understanding of the language, knowledge, and wisdom of their people.*

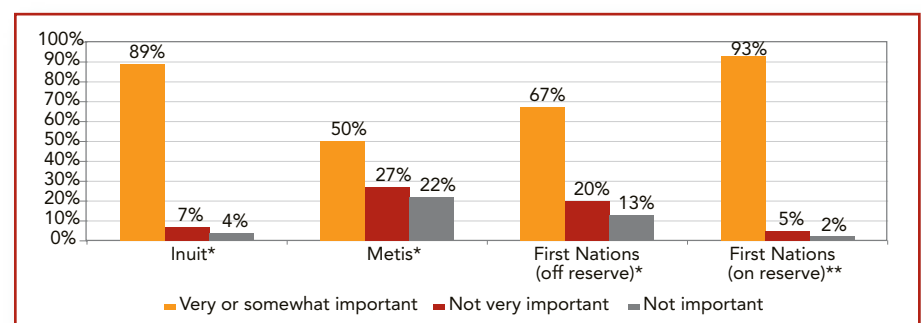
—Marie Battiste, *State of First Nations Learning*<sup>23</sup>

Many landmark documents on Aboriginal learning, including *Indian Control of Indian Education*<sup>24</sup> in 1972 and the *Report of the Royal Commission on Aboriginal Peoples* in 1996, have underscored the pivotal roles that language and culture play in successful Aboriginal learning. The Royal Commission noted that “language is the principal instrument by which culture is transmitted from one generation to another, by which members of a culture communicate meaning and make sense of their shared experience.”<sup>25</sup> Three of four Aboriginal languages in Canada are not spoken in any other location on Earth and reflect a unique worldview of an indigenous people toward their land.<sup>26</sup>

In other words, Aboriginal languages are not mere transmitters of culture and wisdom; they are themselves forms of culture and wisdom.<sup>27</sup>

Recent surveys of Aboriginal people underline this point. The majority of Aboriginal parents—particularly Inuit and First Nations living on reserves—believe it is important for children to learn their ancestral language.

#### Parental opinions on the importance of children learning their ancestral language



\*Source: Statistics Canada, Aboriginal Peoples Survey, 2001 (For children aged 0–14)

\*\*Source: First Nations Regional Longitudinal Health Study, 2002–03 (For children aged 0–11)

23 Battiste, Marie and Sheelagh McLean. *State of First Nations Learning* (Ottawa: Canadian Council on Learning, Sept. 15, 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Nov. 29, 2006.

24 Assembly of First Nations. *Indian Control of Indian Education*. Policy Paper presented to the Minister of Indian Affairs and Northern Development (Ottawa:1972).

25 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples, 1996*.

26 Ibid.

27 Battiste, Marie and Sheelagh McLean. *First Nations Learning, 2005*.



## What do we know about Canada's progress?

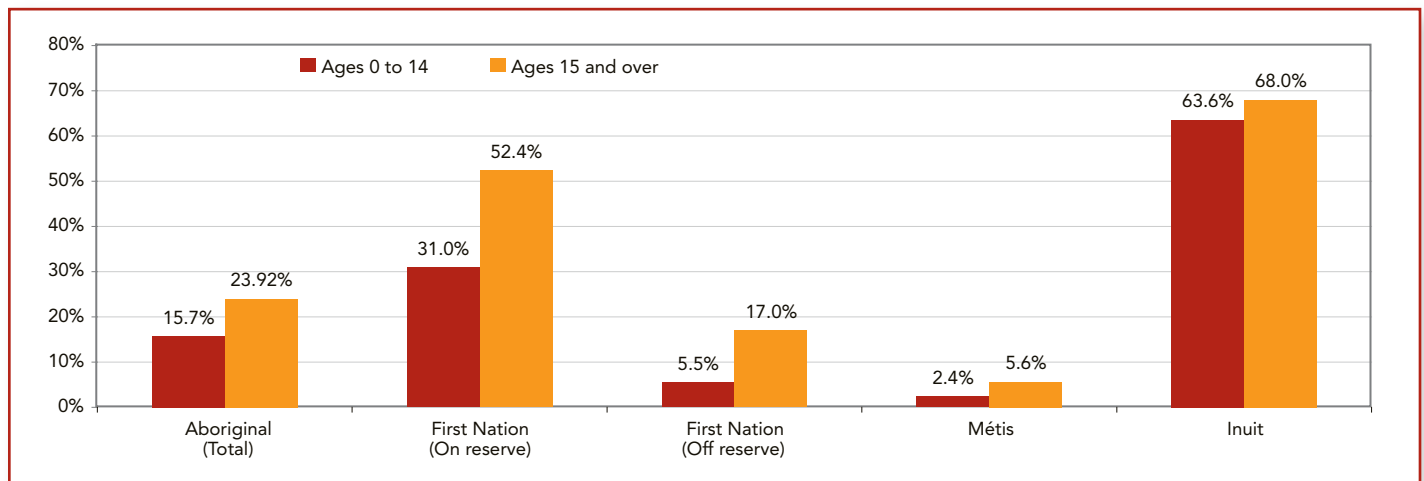
### Knowledge of Aboriginal languages

The 2001 census<sup>28</sup> reports that one in five Aboriginal people (21%), or almost 188,000 individuals, have an Aboriginal language as their *mother tongue*—the first language they learned in childhood and still understand. This represented a decline from 26% in 1996.<sup>29</sup> Inuit people and First Nations people living on reserves were

most likely to speak their indigenous language, while Métis were the least likely.

In 2001, 16% of Aboriginal children 14 years of age or younger (approximately 46,000 children), could speak an Aboriginal language. Aboriginal children are less likely than their parents and Elders to speak an ancestral language. Moreover, the number of children speaking an Aboriginal language declined by seven percentage points between 1996 and 2001.<sup>30</sup>

### Aboriginal Peoples with an Aboriginal language as their mother tongue, by age, 2001



Source: Statistics Canada, Census 2001. Catalogue number 97F0011XCB2001040

### LEARNING A LANGUAGE

Languages, especially those with a strong oral tradition, are passed from one generation to the next.<sup>31</sup> Aboriginal children tend to learn their ancestral languages from parents and grandparents, although aunts, uncles, Elders and school teachers are also important sources.<sup>32</sup> Indeed, the more people who converse with a child, the greater the child's language proficiency will be.<sup>33</sup>

Among Aboriginal children living off reserve who could speak or understand an Aboriginal language, only 15% who could rely on just one source of assistance for learning reported a high level of language proficiency. This proportion increased to 38% for children who rely on three sources of help, to 54% for those with five sources, and to 80% for those who benefitted from seven or more sources of help.<sup>34</sup>

The First Nations Regional Longitudinal Health Survey demonstrates the state of ancestral languages among First Nations people living on reserves. More than two-thirds (68%) of First Nations people over the age of 60 living on reserves reported speaking an ancestral language fluently or relatively well in 2002–2003. However, the proportion dropped to less than one-third for people under 30.<sup>35</sup>

<sup>28</sup> While census data on Aboriginal languages should be used with caution, they are currently the only available pan-Canadian data on Aboriginal languages.

<sup>29</sup> Norris M. J. and L. Jantzen. *From Generation to Generation: Survival and Maintenance of Canada's Aboriginal Languages within Families, Communities, and Cities* (Ottawa: Indian and Northern Affairs Canada and Heritage Canada, Jan. 2004).

<sup>30</sup> Statistics Canada. Census 2001.

<sup>31</sup> Norris M. J. and L. Jantzen. *From Generation to Generation*, 2004.

<sup>32</sup> First Nations Regional Longitudinal Health Survey and Aboriginal Peoples Survey (Ottawa: 2005).

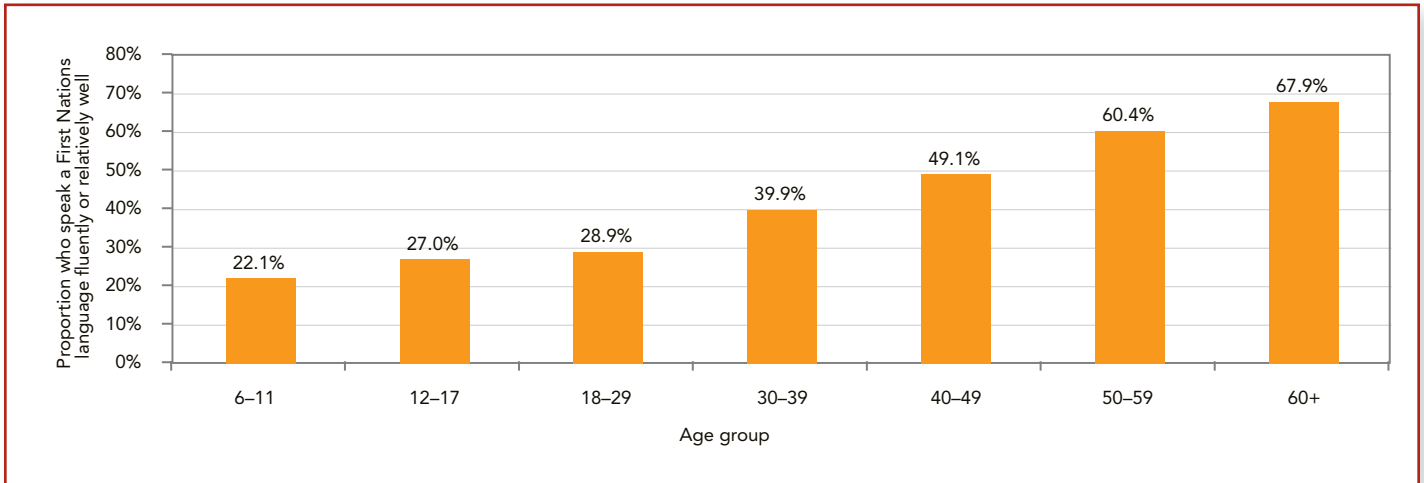
<sup>33</sup> Statistics Canada. *A Portrait of Aboriginal Children Living in Non-reserve Areas: Results from the 2001 Aboriginal Peoples Survey* (Ottawa: 2004). Catalogue No. 89-597-XIE.

<sup>34</sup> *Ibid.*

<sup>35</sup> First Nations Centre. *First Nations Regional Longitudinal Health Survey: The Peoples' Report (RHS) 2002/03* (Ottawa: 2005). Available at [www.naho.ca/firstnations](http://www.naho.ca/firstnations). Accessed Nov. 27, 2006.

# ABORIGINAL LEARNING

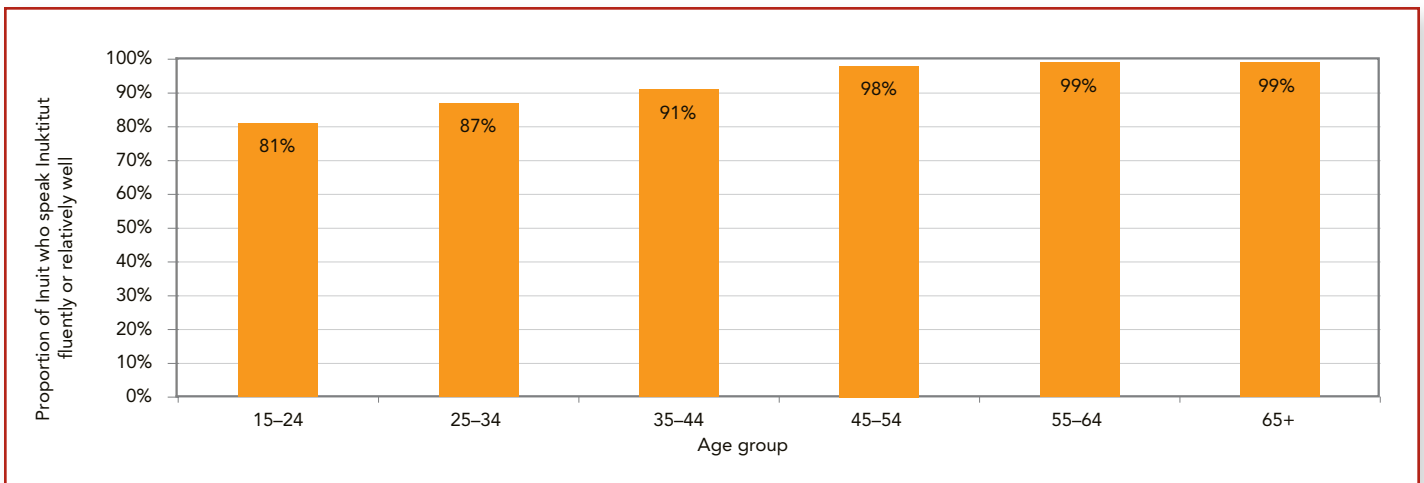
## Ancestral language fluency of First Nations people, by age group, 2002–2003



Source: First Nations Regional Longitudinal Health Survey: The Peoples' Report, 2002–2003, p.39

Among Inuit people in Nunavut, the loss of fluency in ancestral languages is less evident. The 2001 Nunavut Household survey found that nearly all older Inuit (99%) can speak Inuktitut at least relatively well. The same was true of 81% of Inuit youth aged 15 to 24.<sup>36</sup>

## Nunavut Inuit fluency in Inuktitut, by age group, 2001



Source: Nunavut Statistics Bureau, Nunavut Household Survey 2001

According to the United Nations Educational, Scientific and Cultural Organization, a language is considered endangered if it is not being learned by at least 30% of children in the community.<sup>37</sup> Based on the number of Aboriginal-language speakers identified in the census, half of the 50 or so Aboriginal languages in Canada were at risk of extinction in 2001.<sup>38</sup> Only the Inuktitut, Cree and Ojibway languages, with more than 20,000 speakers each, were considered safe.<sup>39</sup>

<sup>36</sup> Nunavut Bureau of Statistics. *Language data from the 2001 Nunavut Household Survey* (Iqaluit: 2002). Available at [www.tunnngavik.com](http://www.tunnngavik.com). Accessed Dec. 1, 2006.

<sup>37</sup> UNESCO. *Atlas of the World's Languages in Danger of Disappearing*, Stephen A. Wurm, ed. (Paris: 1996).

<sup>38</sup> Norris M. J. and L. Jantzen. *From Generation to Generation*, 2004.

<sup>39</sup> Norris, Mary Jane "Canada's Aboriginal Languages," *Canadian Social Trends*, No. 51 (Ottawa: Statistics Canada, Winter 1998). In the 2001 Census, only Inuktitut showed any increase in the number of mother-tongue speakers, compared to 1996 Census results for these three languages.

### Aboriginal mother tongues in Canada, by age group, 2001

ABORIGINAL LANGUAGE	TOTAL NUMBER OF SPEAKERS	NUMBER OF SPEAKERS AGES 14 AND UNDER
Cree	72,880	16,810
Inuktitut	29,005	10,765
Ojibway	21,000	2,595
Oji-Cree	9,730	3,165
Montagnais-Naskapi	9,705	3,450
Dene	8,885	2,850
Micmac	7,230	1,760
Attikamekw	4,620	1,925
Dakota/Sioux	3,900	870
Blackfoot	2,745	120
Dogrib	1,865	465
Algonquin	1,450	310
South Slave	1,385	125
Carrier	1,245	40
Gitksan	905	20
North Slave (Hare)	850	140
Chilcotin	810	70
Malecite	760	115
Shuswap	630	80
Chipewyan	580	10
Nishga	510	0
Nootka	410	10
Thompson (Ntlakapamux)	400	10
Tsimshian	340	10
Kutchin-Gwich'in (Loucheux)	320	10
Mohawk	310	35
Haida	145	10
Kutenai	125	10
Tlingit	105	0
Other Aboriginal Languages	4,695	135
<b>Total Aboriginal languages</b>	<b>187,675</b>	<b>46,025</b>

Source: Statistics Canada, Census 2001. Catalogue No.97F0007XCB2001001

### Bilingual and Immersion Programming

Over the past generation, Canada has developed impressive expertise in bilingual and immersion programming to advance the English and French languages in minority settings. Aboriginal Peoples have supported similar approaches in order to sustain fluency in their ancestral languages.<sup>40</sup>

Some First Nations communities have, in fact, incorporated bilingual and immersion programming in their schools. Since 2003, for instance, the Lac La Ronge Indian Band in Saskatchewan has been refining the Gift of Language and Culture Project, a minority-language instruction and immersion program for children in nursery school to Grade 9.<sup>41</sup>

A recent annual study of First Nations schools in British Columbia found that 53% of schools offered distinct classes in First Nations languages and cultures in 2005. However, only 15% were able to integrate language and culture across most of the curriculum. None of the First Nations schools in British Columbia had a complete immersion program.<sup>42</sup>

Aside from such isolated cases, the total number of bilingual immersion programs across the country remains unknown. Moreover, there has been no comprehensive research of the impact of linguistic programming on learning outcomes for Aboriginal students in Canada.

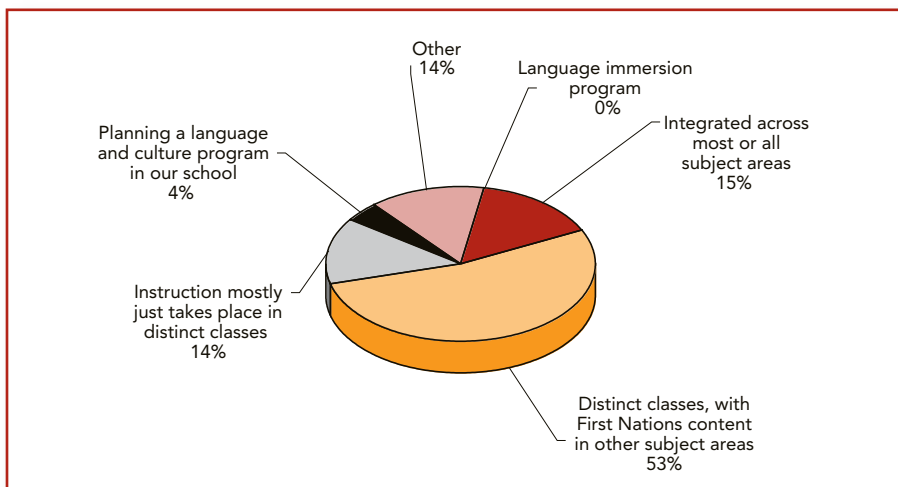
40 See: Assembly of First Nations. "Background Paper on Lifelong Learning" (Ottawa: 2004). Available at [www.aboriginalroundtable.ca](http://www.aboriginalroundtable.ca). Accessed Nov. 27, 2006. Also, Inuit Tapiriit Kanatami. "Backgrounder on Inuit and Education" (Ottawa: 2004). Available at [www.aboriginalroundtable.ca](http://www.aboriginalroundtable.ca). Accessed Nov. 27, 2006.

41 Gift of Language and Culture website. Available at [www.giftoflanguageandculture.ca](http://www.giftoflanguageandculture.ca). Accessed Nov. 27, 2006.

42 First Nations Education Steering Committee (FNESC). *The First Nations Schools Association School Measures and Data Collection Project—2006 Results* (Vancouver: 2006). Available at [www.fnesc.ca](http://www.fnesc.ca). Accessed Nov. 27, 2006.

# ABORIGINAL LEARNING

## Integration of ancestral languages and cultures, First Nations schools in British Columbia, 2005



Source: First Nations Education Steering Committee 2006. The First Nations Schools Association School Measures and Data Collection Project, 2006

## EARLY DEVELOPMENT AND LEARNING

With a comparatively young and growing population, indicators of early childhood learning and development are especially important for Aboriginal Peoples. Unfortunately, few data sources provide a complete pan-Canadian picture of these issues.

The following sections describe what is known about the living conditions and health of Aboriginal children, and the prevalence of early childhood learning programs.

## What do we know about Canada's progress?

### Aboriginal child health and living conditions

A 2004 federal government study assessed the quality of life in 4,685 Canadian communities. It found that only one of 541 First Nations communities ranked in the top 100 on the *community well-being index*, while 92 were in the bottom 100. Half (50%) of the First Nations communities scored in the lowest range of the index, compared with 3% of other Canadian communities.<sup>47</sup>

Poverty affects more than four in 10 Aboriginal children (41%). In conjunction with inadequate shelter and other social factors, it threatens the prenatal and early childhood health and development of many Aboriginal children.<sup>48</sup>

For instance, the proportion of children under the age of 15 living in single-parent homes in 2001 was 54% for First Nations living in urban areas, 27% for Inuit and 35% for Métis populations. Among non-Aboriginal children, only 18% lived with just one parent.<sup>49</sup> Many First Nations people living on reserves and Inuit communities also lack regular access to clean water, nutritious food and adequate health-care services.<sup>50,51</sup>

## MĀORI LANGUAGE PROGRAMMING IN NEW ZEALAND

In the early 1980s, Māori Elders in New Zealand developed pre-school immersion programs to teach younger generations about their ancestral language and traditional values, beliefs and knowledge. The program, called *Te Kohanga Reo*, or language nests, involves Elders, parents and children conducting everyday activities in the Māori language. The programs aim to strengthen family connections while teaching the language and traditional values, beliefs and knowledge of the Māori.<sup>43</sup>

To help Māori children maintain their language once they reach school age, the New Zealand government supports Māori immersion and bilingual education at the elementary and secondary levels.<sup>44</sup> Analysis by New Zealand's education ministry found that educational attainment for Māori children enrolled in immersion and bilingual schools was higher than for Māori learners attending English-only schools.<sup>45</sup>

Aboriginal people want to prepare their children for stronger academic performance, but their concerns go beyond a singular focus on cognitive development ... Most important, they see early childhood education as a means of reinforcing Aboriginal identity, instilling the values, attitudes and behaviours that give expression to Aboriginal cultures.

— Royal Commission on Aboriginal Peoples<sup>46</sup>

43 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples*, 1996.

44 Murray, S. *Achievement at Māori immersion & bilingual schools—Update for 2004 results* (Wellington: Demographic and Statistical Analysis Unit, New Zealand Ministry of Education, 2005). Available at [educationcounts.edcentre.govt.nz](http://educationcounts.edcentre.govt.nz). Accessed Nov. 27, 2006.

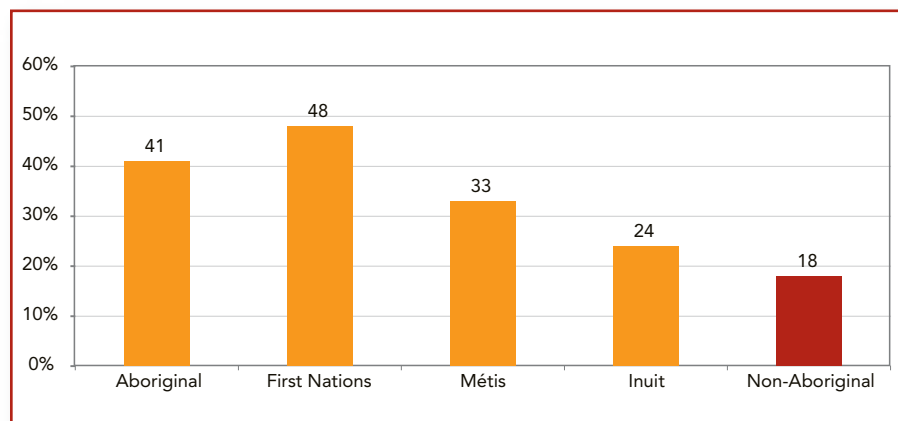
45 *Ibid.*

46 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples*. Vol. 3, 1996.

47 McHardy, M. and E. O'Sullivan. *First Nations Community Well-Being in Canada: The community well-being index (CWB)*, 2001. (Ottawa: Strategic Research and Analysis Directorate, Indian and Northern Affairs Canada, 2004).

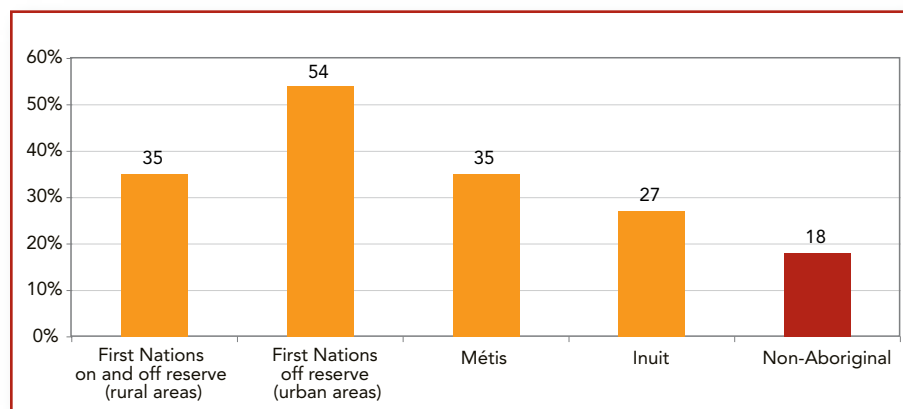
48 Sarah Cox. *Early Childhood Development—Models and Studies* (Ottawa: Education Renewal Initiative, Secretariat, Indian and Northern Affairs Canada, Nov. 4, 2002).

### Children under 15 years living in low-income families, 2001



Source: Statistics Canada, Census 2001. Catalogue no. 97F0011XCB2001046

### Children under 15 years not living with two parents, 2001



Source: Statistics Canada, Census 2001

Health has an effect on a child's ability to learn, particularly in the early years. Many Aboriginal children suffer poor health relative to non-Aboriginal children.

For example, Aboriginal children have higher rates of disability and respiratory problems than the overall Canadian population.<sup>52,53</sup> They are also more likely to suffer injury.<sup>54</sup> Fetal Alcohol Syndrome Disorder and Fetal Alcohol Effects, which affect 1.8% of First Nations children living on reserve,<sup>55</sup> are also more common in Aboriginal communities.<sup>56</sup>

Along with high rates of acute and chronic health problems among Aboriginal children, research suggests there are insufficient treatment options available to First Nations living on reserve.<sup>57</sup>

### Early childhood learning programs

Effective early childhood education programs, especially when they involve the family and the community, can prepare Aboriginal children for school and provide a foundation for further development.<sup>58,59</sup>

The Aboriginal Head Start (AHS) programs, for instance, provide valuable early childhood education for Aboriginal children living off and on reserves. One study showed that while 18% of six- to 11-year-old First Nations children living on reserves had repeated a grade, the proportion dropped to 12% for children who had attended a preschool AHS program.<sup>60</sup>

#### ABORIGINAL HEAD START PROGRAMS

The Aboriginal Head Start (AHS) programs launched by the federal government in 1995 are half-day preschool programs for two- to five-year-olds that emphasize culture and language, school readiness, health and nutrition, social support and family involvement. In 2001, about 6,500 First Nations children living on reserves and 3,500 off-reserve First Nations, Métis and Inuit children participated in an AHS program.<sup>61</sup>

49 Statistics Canada. Census 2001.

50 First Nations Centre. *Longitudinal Health Survey, 2005*.

51 Indian and Northern Affairs Canada. *National Assessment of Water and Wastewater Systems in First Nations Communities—Summary Report May 2003* (Ottawa: 2003). Available at [www.ainc-inac.gc.ca](http://www.ainc-inac.gc.ca). Accessed Nov. 26, 2006.

52 Government of Canada. *Lifelong Learning Policy Paper prepared for the Canada-Aboriginal Peoples Roundtable* (Ottawa: Nov. 2004).

53 Health Canada. *A Statistical Portrait on The Health of First Nations in Canada* (Ottawa: 2005).

54 First Nations Centre. *Longitudinal Health Survey, 2005*.

55 Ibid.

56 Canadian Institute of Child Health. *The Health of Canada's Children—Third Edition* (Ottawa: 2000).

57 First Nations Centre. *Longitudinal Health Survey, 2005*.

58 For more information on the benefits and characteristics of effective early childhood education, see Chapter 2 of this report.

59 First Nations Centre. *Longitudinal Health Survey, 2005*.

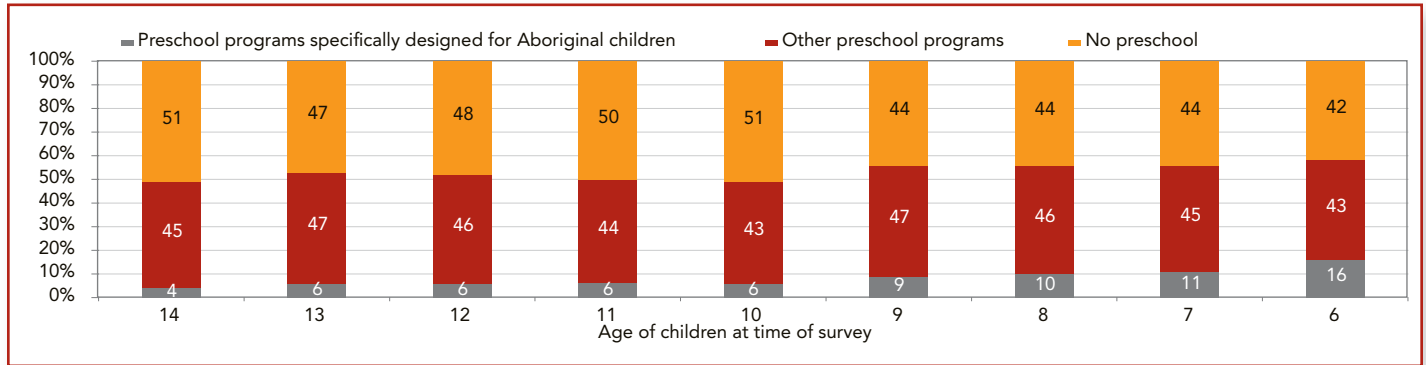
60 Ibid.

61 Health Canada. *Aboriginal Head Start in Urban and Northern Communities—Program and Participants 2001* (Ottawa: 2002). Available at [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca). Accessed Nov. 26, 2006.

# ABORIGINAL LEARNING

Aboriginal children's access to early childhood development supports has been improving in recent years. In 2001, for example, 16% of six-year-old Aboriginal children living off reserves had participated in Aboriginal-specific programs during their preschool years, compared to only 4% of children who had turned 14 by that year.<sup>62</sup> Even so, approximately 90% of Aboriginal children lacked access to early childhood programming specifically designed for their needs.<sup>63</sup>

## Preschool attendance by Aboriginal children in non-reserve areas, 2001



Source: Statistics Canada, Aboriginal Peoples Survey, 2001  
 Note: Percentages in this chart may not add up to 100% due to rounding.

## SCHOOL-BASED LEARNING

For all children and youth, whether of Aboriginal descent or not, success in elementary and secondary school is essential for the pursuit of further education and training, finding a suitable job, and meeting the responsibilities of adulthood.

A recent study calculated that an Aboriginal man living in Saskatchewan who has not graduated from high school will, on average, earn \$500,000 less than his lifetime potential. An Aboriginal woman who completes high school and attends university, however, has the potential to earn more than \$1 million over her lifetime. If she does not complete high school, on the other hand, her lifelong earnings will, on average, be less than \$90,000.<sup>64</sup>

## Aboriginal lifetime earnings in Saskatchewan

	MALE LIFETIME EARNINGS	FEMALE LIFETIME EARNINGS
An Aboriginal person drops out of school (does not complete high school)	\$ 344,781	\$89,502
An Aboriginal person completes high school (with no further formal education)	\$861,636	\$294,350
An Aboriginal person attends a program at a non-university post-secondary institution (with no further formal education)	\$1,191,146	\$646,904
An Aboriginal person attends a program at a university	\$1,386,434	\$1,249,246

Source: Howe, E. "Education and Lifetime Income for Aboriginal People in Saskatchewan," *Aboriginal Policy research: Setting the agenda for Change*, Vol. 1, J. P. White, P. Maxim and D. Beavon, eds. (Toronto: Thompson Education Publishing, 2004). pp. 175-191.

## What do we know about Canada's progress?

### High-school attainment

According to the 2001 Census, 57% of Aboriginal people between the ages of 20 and 24 attained a high-school diploma or higher. This proportion has been rising steadily from 38% in 1981.<sup>65</sup>

In 2001, the proportion of Aboriginal people aged 20 to 24 who had not attained a high-school diploma was more than 2.5 times higher than the proportion of non-Aboriginal Canadians. The gap in high-school attainment was highest for Inuit (3.6 times) and First Nations people living on reserves (3.3 times), and lowest for Métis people (2.1 times).

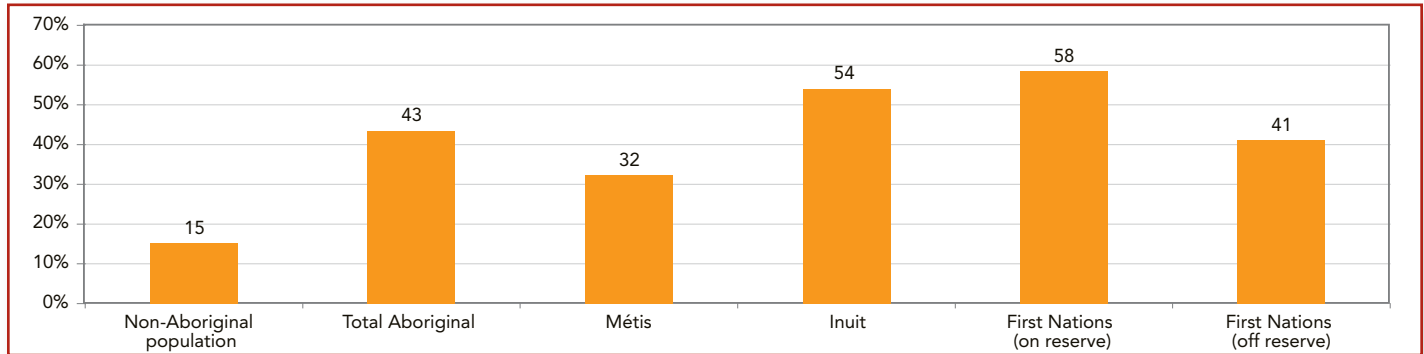
62 Statistics Canada. *Aboriginal Peoples Survey* (Ottawa: 2002).

63 Government of Canada. *Lifelong Learning Policy Paper prepared for the Canada-Aboriginal Peoples Roundtable* (Ottawa:2004).

64 Howe, Eric. "Saskatchewan with an Aboriginal Majority: Education and Entrepreneurship," *The Saskatchewan Institute of Public Policy*, Public Policy Paper Series #44 (Regina: University of Regina, Sept. 2006).

65 Government of Canada. *Report of the President of the Treasury Board of Canada: Canada's Performance—The Government of Canada's Contribution. Annual Report to Parliament 2005* (Ottawa: Treasury Board of Canada, 2005). Available at www.tbs-sct.gc.ca. Accessed Nov. 27, 2006.

**Proportion of population aged 20 to 24 with incomplete high-school learning, 2001**



Source: Statistics Canada, Census 2001

Historically, many Inuit and First Nations students living on reserve identified that their primary reason for leaving high school early was the lack of a high school located in their community.<sup>66,67</sup> Inuit and First Nations learners living on reserve often have to travel to distant provincial and territorial high schools, leaving behind parents and community supports. However, as access to local high schools in Nunavut communities has improved in recent years, the primary reasons why Inuit students are now leaving high school are to enter the labour force, to help at home, or to care for a child.<sup>68</sup>

**LEARNING OPPORTUNITIES FOR ABORIGINAL STUDENTS**

Aboriginal students in Canada attend one of three types of elementary or secondary schools:

- provincial/territorial schools, where almost all Métis, Inuit, and First Nations students living off reserve, and 36% of First Nations living on reserve, are enrolled;
- one of the 507 First Nations schools located on reserve, where 62% of First Nations students living on reserve are enrolled; and
- one of the seven remaining federal schools located on reserve and managed by the federal government, where less than 2% of First Nations students living on reserve are enrolled.<sup>69</sup>

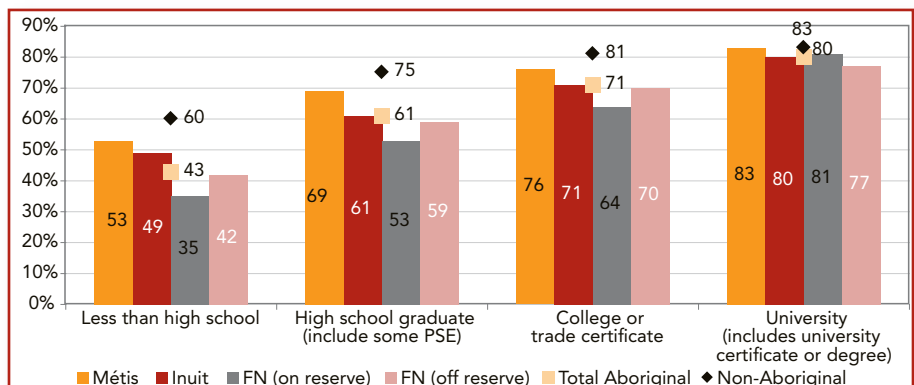
**POST-SECONDARY EDUCATION AND SKILLS TRAINING**

For all individuals, post-secondary education brings a range of benefits, including greater prosperity, better health and well-being, and greater community or civic engagement.<sup>70</sup> For Aboriginal people, higher education can also bring greater economic equality with the overall Canadian population.

Aboriginal people with a university degree, for instance, are nearly as likely to find jobs as non-Aboriginal Canadians.<sup>71</sup> This observation applies equally to all Aboriginal men and

women, although Métis and Inuit people with post-secondary education tend to experience the highest rates of employment among Aboriginal groups.

**Employment rate by educational attainment, 2001**



Source: Statistics Canada, Census 2001

66 Nunavut Bureau of Statistics. *Language data from the 2001 Nunavut Household Survey* (Iqaluit:2002). Available at [www.tungnavik.com](http://www.tungnavik.com). Accessed Dec. 1, 2006  
 67 Assembly of First Nations. *Lifelong Learning Policy Paper prepared for the Canada-Aboriginal Peoples Roundtable* (Ottawa: 2004).  
 68 Government of Nunavut and Nunavut Tunngavik Incorporated. *Background Paper submitted to the Canada-Aboriginal Peoples Roundtable* (Iqaluit and Ottawa: 2004).  
 69 Simon Management Services. *A Study of Educational Cost Drivers to First Nations Education*. Prepared for the Assembly of First Nations and Indian Affairs Canada Band Operated Formula Funding Working Group (Unpublished).  
 70 For more information, please see the Canadian Council on Learning's report on post-secondary education, *Canadian Post-secondary Education: A Positive Record – An Uncertain Future* (Ottawa: 2006).  
 71 Hull, Jeremy. *Post-Secondary Education and Labour Market Outcomes Canada, 2001* (Winnipeg: Prologica Research Inc., 2005).

# ABORIGINAL LEARNING

## What do we know about Canada's progress?

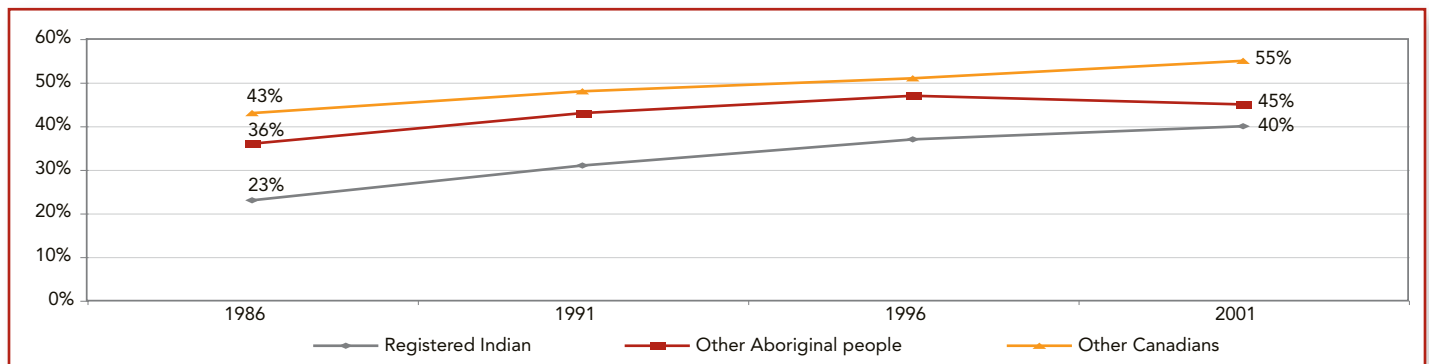
### Post-secondary participation

Census data reveal a steady rise in post-secondary participation and attainment rates among Aboriginal Peoples in recent years. In 2001, more than 170,000 Aboriginal people had completed a post-secondary degree, diploma, or certificate. Of registered Indians<sup>72</sup> aged 15 years and older, 40% were attending or had completed post-secondary education, compared to 23%

in 1986. The rate for other Aboriginal people was 45% in 2001, up from 36% 15 years earlier.

While a larger proportion of Aboriginal people are completing post-secondary education, the gap between Aboriginal and non-Aboriginal people in Canada remains wide. In 1986, the proportion of non-Aboriginal Canadians with some post-secondary education was almost twice (1.9 times) as high as the rate for Registered Indians. By 2001, this gap had narrowed somewhat, to 1.4 times as high.

### Attending or completed post-secondary education, aged 15 and older, 1986–2001



Data source: Statistics Canada census data from 1986, 1991, 1996, 2001

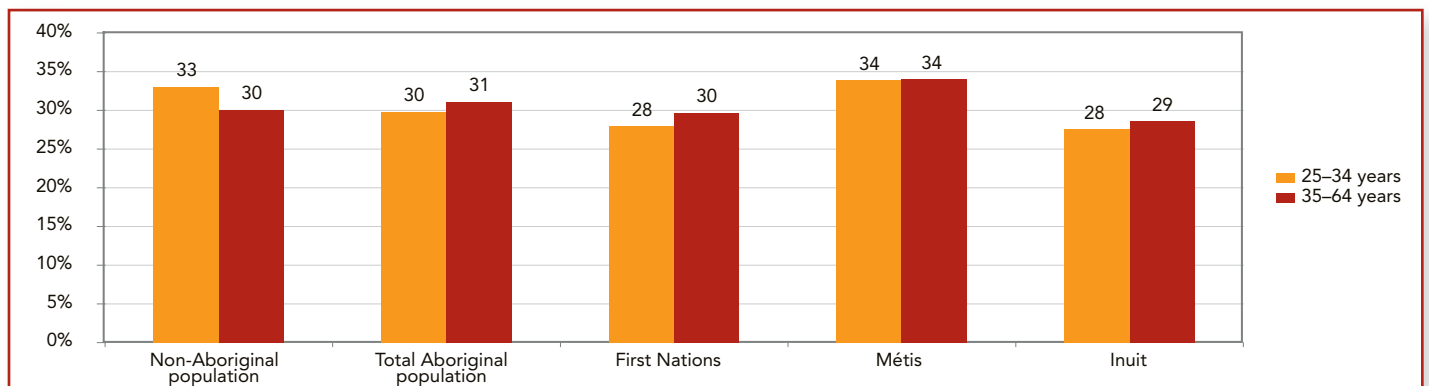
Sources: Hull, Jeremy. *Post-Secondary Education and Labour Market Outcomes Canada, 2001*, Prologica Research Inc. Also, R.A. Malatest & Associates Ltd. (2004). *Aboriginal Peoples and Post-Secondary Education: What Educators Have Learned*, Canada Millennium Scholarship Foundation, 2004

### College or vocational training

For most Aboriginal adults, post-secondary education means college or trade school. According to the 2001 census, the proportion of Aboriginal adults who complete college or vocational training is similar to the rate among non-Aboriginal Canadians. Métis adults actually earned college or trades credentials at slightly higher rates than the non-Aboriginal population.

Older Aboriginal adults, aged 35 to 64, were more likely than younger Aboriginal people to have completed college or trades credentials. This suggests that older Aboriginal people, especially First Nations, are returning to school to pursue higher learning later in life.

### Proportion of Aboriginal populations attaining a college diploma or trades certificate, by age group, 2001



Source: Statistics Canada, Census 2001

<sup>72</sup> Registered Indian refers to those persons who reported they were registered under the Indian Act of Canada.



### NUNAVUT SIVUNIKSAVUT TRAINING PROGRAM

The Nunavut Sivuniksavut is a college program created in 1985 to help Inuit youth prepare for the educational, training, and career opportunities created by the Nunavut Land Claims Agreement and the formation of the new territorial government.<sup>73</sup> Students in the program learn about Inuit history and traditions, including songs, throat singing, drumming, dancing and games. They visit Inuit communities and organizations, learn about future careers in Nunavut, and engage in cultural exchanges with other indigenous peoples. Students also learn about land claims and spend eight months in southern Canada, where they learn how to live on their own as independent adults.<sup>74</sup>

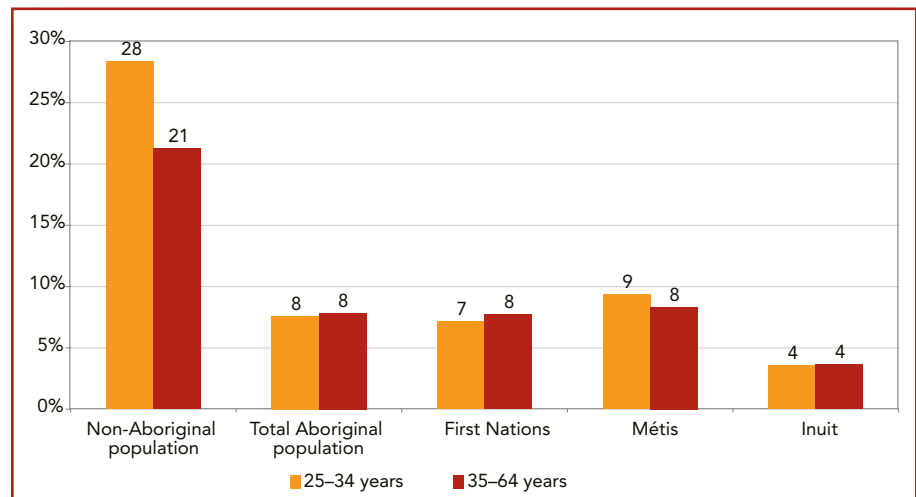
#### University completion

Aboriginal people are significantly less likely to attain a university degree than a college diploma or trades certificate. Only 8% of Aboriginal people aged 25 to 34 had completed a university education in 2001. The attainment rates were especially low for the Inuit, where only 4% completed university. By comparison, the university completion rate for non-Aboriginal Canadians was 28%.

Among Aboriginal people, trends in university attainment have not changed significantly in recent years. Younger Aboriginal adults are completing university at lower rates than older Aboriginal adults. Among non-Aboriginal Canadians, by contrast,

younger adults are more likely to pursue a university degree now than in the past. As a result, there is a large gap in university attainment between Aboriginal people and non-Aboriginal Canadians, especially for adults aged 25 to 34.

#### Proportion of Aboriginal populations with a university degree, by age group, 2001



Source: Statistics Canada, Census 2001

#### Adult literacy

Comprehensive Canada-wide data on literacy rates among Aboriginal people are not available. However, the 2003 International Adult Literacy and Life Skills Survey, provides some information on literacy rates among Aboriginal adults living in cities in Manitoba and Saskatchewan, in the Northwest Territories and Yukon, as well as the Inuit in Nunavut.

The survey, which is undertaken only in English and French and not available in any Aboriginal languages, revealed prose literacy scores that were, on average, lower for Aboriginal participants than for the overall Canadian population. On the prose literacy scale, more than 60% of the urban Aboriginal adults in Manitoba and Saskatchewan scored below level three, which is considered a minimum for success in a knowledge-based economy. This compared with 45% of non-Aboriginal adults in Manitoba and 39% in Saskatchewan.<sup>75</sup>

Furthermore, over half of the Aboriginal adults in Yukon, about 69% in the Northwest Territories and 88% of Inuit in Nunavut scored below level three. The comparable proportion for all working-age adults in Canada was 42%.<sup>76</sup> However, since 60% of Nunavummiut who took part in the survey identified Inuktitut as the language for which they use on a regular basis, the results are limited in identifying the complete literacy skills for Inuit adults.<sup>77</sup>

73 Nunavut Sivuniksavut Training Program website. Available at <http://www.nstraining.ca>. Accessed Nov. 14, 2006.

74 Inuit Tapiriit Kanatami. *State of Inuit Learning in Canada*. Prepared for the Canadian Council on Learning (Ottawa: 2005).

75 Statistics Canada. "International Adult Literacy and Life Skills Survey (IALSS)." *The Daily* (Ottawa: Nov. 5, 2005). Available at [www.statcan.ca](http://www.statcan.ca). Accessed Nov. 27, 2006.

76 *Ibid.*

77 Nunavut Literacy Council. *Report on Literacy in Nunavut*. Available at [www.nunavutliteracy.ca](http://www.nunavutliteracy.ca). Accessed Dec. 1, 2006.

# ABORIGINAL LEARNING

## INDIGENOUS INSTITUTIONS OF HIGHER LEARNING

Several indigenous institutions of higher learning have emerged in recent years to help meet the needs of Aboriginal learners who are not well served by non-Aboriginal post-secondary facilities.<sup>78</sup>

The First Nations Technical Institute in Ontario, for instance, is located on Tyendinaga Mohawk territory and close to the home communities of its students. This is in contrast to non-Aboriginal post-secondary institutions that tend to be concentrated in larger cities.<sup>79</sup>

Indigenous institutions of higher learning also promote learning for adults already in the workforce. Thus, a typical approach is to deliver courses for a four- or five-day stretch, followed by a break of several weeks to allow the students to resume their jobs.

The Royal Commission on Aboriginal Peoples noted that indigenous institutions have reported relatively high completion rates for their Aboriginal learners. The Métis-run Gabriel Dumont Institute in Saskatchewan, for instance, reported a completion rate of 70%, while the Secwepemc Education Institute in British Columbia reported approximately 80% of its students graduated.<sup>80</sup>

Many landmark documents in Aboriginal learning, including *Indian Control of Indian Education* in 1972, identified the need for community-based learning built on two key principles—local governance, and parental and community engagement.

Aboriginal Peoples have long advocated for governance of their own education systems and greater influence over the education of their people. For First Nations people living on reserve, this means their communities make decisions on learning policies across the lifespan, develop curriculum standards, assess program quality and deliver educational services.<sup>81</sup>

Research suggests that First Nations communities are stronger when they gain more control over their own affairs. A study of First Nations youth in British Columbia, for example, concluded that community well-being, indicated by lower youth suicide rates, hinges on factors such as self-government, community control of education, health and public safety, and the maintenance of cultural facilities.<sup>82</sup> Similarly, an Ontario study found that First Nations students were more likely to graduate from high school in communities where the local council ranked education as a top priority.<sup>83</sup>

Engagement by parents and the broader community is equally important. A review of Aboriginal learning concluded that:

- active parental involvement in decision-making brings children closer to their teachers
- Aboriginal parents who are engaged in their children's schools grow in confidence, which has a positive impact on their children's learning
- harmful stereotypes about Aboriginal students and families fall away as teachers collaborate with parents
- local Aboriginal communities grow in self-respect and acquire genuine political influence as they take greater responsibility for their schools<sup>84</sup>

## COMMUNITY-BASED EDUCATION

A community-based approach [to learning] means that a unified approach is fostered and the people of the community are actively involved in the education systems.... It means Elders, family members, and community members are included in the learning process."

— Assembly of First Nations, *Tradition and Education: Towards a Vision of Our Future* (1988)

78 Katenies Research and Management Services and Chignecto Consulting Group Inc. *Review of the Indian Studies Support Program Component of the PSE Program* (Ottawa: Assembly of First Nations, 2006).

79 *Ibid.*

80 Canada. Royal Commission Report on Aboriginal People. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3 (Ottawa: Canada Communications Group, 1996).

81 Assembly of First Nations. *First Nations Educational Jurisdiction—National Background Paper* (Ottawa, 2001). Prepared for a national and regional discussion in April 2001.

82 Chandler, Michael J. and Christopher Lalonde. "Cultural Continuity as a Hedge against Suicide in Canada's First Nations," *Transcultural Psychiatry*, Vol. 35(2) (Thousand Oaks, CA: SAGE Publications, 1998). pp. 191–219.

83 Mackay, Ron and Lawrence Myles. "A Major Challenge for the Education System: Aboriginal Retention and Dropout," *First Nations Education in Canada: The Circle Unfolds*. Marie Battiste and Jean Barman. eds. (Vancouver: UBC Press, 1995).

84 Corson, David. "Community-based Education for Indigenous Cultures," *Language, Culture and Curriculum*, Vol. 11 (3) (Clevedon, UK: Multilingual Matters, 1998). Available at [www.multilingual-matters.net/lcc/011/0238/lcc0110238.pdf](http://www.multilingual-matters.net/lcc/011/0238/lcc0110238.pdf). Accessed Nov. 26, 2006.

## What do we know about Canada's progress?

### Aboriginal governance of learning

*The true purpose of education is to equip individuals with the tools necessary not only for physical survival, but for cultural survival as well. .... It is through education controlled by First Nations that a shattered culture can receive the healing necessary for survival.*

— Assembly of First Nations, *Tradition and Education: Towards a Vision of Our Future*, 1988

In 1969, the Saddle Lake Reserve in Northern Alberta took over management of the Blue Quills Residential School, making it the first school governed by a First Nations community.<sup>85</sup> By 2004, the number of First Nations elementary and secondary schools had grown to 507.<sup>86</sup> Of the 121,000 First Nations students living on reserve in 2004–2005, 62% attended First Nations-managed schools, 36% were in provincial schools, and fewer than 2% were enrolled in one of the seven remaining federal government-managed schools located on reserve.<sup>87</sup>

But while most First Nations reserves in Canada are now managing their own schools, many lack full control over learning across the lifespan, including the authority to develop curriculum, certify teachers and define assessment standards.<sup>88</sup>

Still, the situation has been evolving over the past three decades as First Nations and the federal government sign agreements transferring educational jurisdiction. In 1997, for instance, Mi'kmaq First Nations in Nova Scotia gained the right to make laws in relation to elementary and secondary education.<sup>89</sup>

In 2006, First Nations in British Columbia signed an agreement providing comprehensive jurisdiction over the schooling of on-reserve First Nations children from kindergarten to Grade 12. Under this multilateral agreement between First Nations and the provincial and federal governments, First Nations schools assume authority over such matters as teacher certification and the establishment of curriculum and examinations standards.<sup>90</sup>

The Métis, who are dispersed in towns and cities throughout Canada, face different issues of educational governance. For example, there is the complexity of mixed jurisdiction: the federal government has responsibility for the education of Métis people, but the majority of Métis children attend schools under provincial jurisdiction.<sup>91</sup>

Moreover, with the exception of a few Northern communities and in the Prairie provinces, where the Métis constitute a majority, Métis people have had minimal influence over the schooling of their children.<sup>92</sup> Consequently, their history and languages have received only limited attention in school curricula.

The Inuit, for the most part, share decision-making authority over education with the territorial governments.<sup>93</sup> Inuit organizations such as the Inuit Tapiriit Kanatami have advocated for more formal recognition and integration of Inuit languages and cultures within the territorial education system.<sup>94</sup> In 1975, the Kativik school board in Northern Quebec became the first Inuit-controlled school district in Canada. Today, this school board continues to operate its own schools, deliver Inuit teacher education programs and develop curriculum in its own language.<sup>95</sup>

85 Kavanagh, Barbara. *Reaching for Success: Considering the Achievements and Effectiveness of First Nations schools*. Written with the First Nations Education Steering Committee and Standards project Advisory Committee (Vancouver: July 1998).

86 Simon Management Services. *A Study of Educational Cost Drivers to First Nations Education*. Prepared for the Assembly of First Nations and Indian Affairs Canada Band Operated Formula Funding Working Group (Quebec: April 2006).

87 *Ibid.*

88 Cornell, Stephen and Joseph P. Kalt. "Alaska Native Self-Government and Service Delivery: What Works?" *Joint Occasional Papers on Native Affairs*, No. 2003-01 (Cambridge, MA: Harvard Project on American Indian Economic Development and Native Nations Institute for leadership, management and policy, 2003).

89 Morgan, Nancy A. "Building a Foundation for First Nations Jurisdiction over Education," Background Paper prepared for a joint AFN-INAC education policy forum (Vancouver: March 2, 2005).

90 First Nations Education Steering Committee website. Available at [www.fnesc.ca](http://www.fnesc.ca). Accessed Nov. 27, 2006.

91 Hodgson, Kathy. "State of Métis Learning," Background Paper for the National Dialogue on Aboriginal Learning (Ottawa: Canadian Council on Learning, Nov. 13–14, 2005).

92 Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3, 1996.

93 Morgan, Nancy A. "Building a Foundation for First Nations Jurisdiction over Education," Background Paper prepared for a joint AFN-INAC education policy forum (Vancouver: March 2, 2005).

94 Inuit Tapiriit Kanatami Backgrounder on Inuit Education (Ottawa: 2004). Available at [www.aboriginalroundtable.ca](http://www.aboriginalroundtable.ca).

95 Vick-Westgate, Ann. *Nunavik: Inuit-controlled education in Arctic Quebec*, Northern Lights Series (Calgary, AB: University of Calgary Press, 2002).

96 Statistics Canada, Aboriginal Peoples Survey.

97 For more information, please see "How Parents Foster Early Literacy," *Lesson in Learning* (Ottawa: Canadian Council on Learning, Feb. 1, 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

98 Statistics Canada. Aboriginal Peoples Survey, 2001.

# ABORIGINAL LEARNING

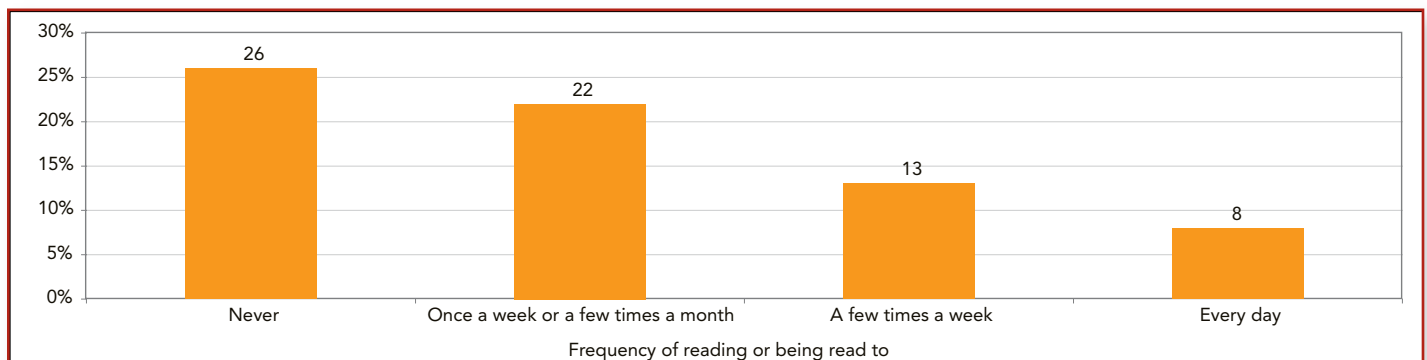
## Family engagement

The home is a child's first classroom; parents and other family members a child's first teachers. Parental and family engagement in a child's education, and family activities involving reading, are factors widely known to contribute to learning.

The limited available data suggest that 70% of Aboriginal children under the age of 14 and not living on reserves read or are read to several times a week or more. This proportion was highest among Métis families, at 77%, and lower for First Nations (69%) and Inuit (54%) families.<sup>96</sup>

Studies have emphasized the positive effect that family reading can have on a child's literacy and school performance.<sup>97</sup> Research on Aboriginal children living off reserves, for instance, found that those who read or were read to more frequently were less likely to repeat a grade in school.<sup>98</sup>

## The connection between reading at home and repeating a grade at school, Aboriginal children, ages 6–14, 2001



Source: Statistics Canada, Aboriginal Peoples Survey, 2001

Canadian-wide data on parental involvement in Aboriginal schools are limited. However, some information can be gleaned from provincial or community-based sources. For example, an annual survey of schools controlled by First Nations communities in British Columbia found that 72% of parents attended parent-teacher interviews in 2005.<sup>99</sup>

## 5.3 The Road Ahead

### WHERE DOES CANADA STAND?

There are insufficient pan-Canadian data on Aboriginal learning to monitor progress across the full spectrum of lifelong learning. Existing data suggest that progress in Aboriginal learning outcomes has been made, particularly over the past two decades. Even so, a significant gap remains between Aboriginal and non-Aboriginal people. The gap is especially wide for First Nations and Inuit Peoples, and in the area of university completion.

Ancestral languages and cultures are intrinsically tied to success in lifelong learning for Aboriginal Peoples. Despite this, Aboriginal children are not learning their ancestral languages at the same rate as their parents and Elders. Some Aboriginal languages are actually enjoying

a resurgence in recent years. Even so, nine languages have become extinct over the past 100 years and at least 25 more are at risk.<sup>100</sup>

Along with language and culture, there is a growing recognition of the importance of community in the learning experience of young Aboriginal people. Consequently, there is a move toward a more holistic perspective on learning, in which parents, families, and Elders are extensions of the local school.<sup>101</sup>

In a similar vein, researchers have also identified a relationship between increased Aboriginal governance over learning and the well-being of Aboriginal communities. Further research and analysis are needed to

<sup>99</sup> First Nations Education Steering Committee (FNESC). *School Measures and Data Collection Project*.

<sup>100</sup> Norris, Mary Jane. "Canada's Aboriginal Languages," *Canadian Social Trends* (Ottawa: Statistics Canada, Winter 1998).

<sup>101</sup> Battiste, Marie. *State of Aboriginal Learning*.

identify the most effective practices where local control over education is affecting the success of First Nations, Métis, and Inuit learners.

### WHAT WE DON'T KNOW

Canadians recognize a growing need to close the gap in learning outcomes between Aboriginal Peoples and non-Aboriginal Canadians. This demands sound research to generate the evidence and knowledge needed for effective policies.

So far, though, the data are insufficient. At a pan-Canadian level, researchers depend on the national census and the associated Aboriginal Peoples Survey. Other pan-Canadian and regional data sources designed and maintained by Aboriginal organizations, such as the First Nations Regional Longitudinal Health Study, have made important contributions to what we know about Aboriginal learning. Even so, more comprehensive and timely information on Aboriginal learning is needed.

#### REDEFINING SUCCESS IN ABORIGINAL LEARNING

*As provinces and territories move to implement Canada-wide testing of students, the goals of education embodied in such testing are defined by non-Aboriginal authorities. Some Aboriginal parents and communities may share these goals, but it should not be assumed that they will place them above their own goals for the education of their children. Self-determination in education should give Aboriginal people clear authority to create curriculum and set the standards to accomplish their education goals.*

—1996 Royal Commission Report  
on Aboriginal Peoples<sup>102</sup>

The information should also more accurately reflect the holistic nature of Aboriginal learning across the lifespan. Educational indicators now widely used by governments and researchers often do not reflect the goals and values identified by Aboriginal Peoples. Indicators of Aboriginal learning must be broadened to measure more than simply years of schooling and performance on standardized assessments. While these are important

measures for participating in the Canadian economy, they do not recognize the cultural, physical, emotional and mental aspects of lifelong learning valued by Aboriginal Peoples.<sup>103</sup>

Indeed, most research in recent decades has focussed on the educational deficits of Aboriginal people in the school system. At the same time there has been little consideration of the importance of informal and traditional educational activities in the community. Informal community learning, including traditional arts and crafts, spiritual healing, traditional cooking and hunting and other activities, is a widespread, vital—but too often unrecognized—form of Aboriginal learning.<sup>104</sup>

### WHAT CCL WILL DO

CCL's Aboriginal Learning Knowledge Centre provides a pan-Canadian forum for the collaborative development of solutions to the learning challenges faced by First Nations, Métis and Inuit peoples.

In the years ahead, the centre will continue to support researchers within Aboriginal communities and the sharing of knowledge about effective approaches to lifelong learning. In particular, the centre will focus on six priorities:

- learning in place
- understanding the learning spirit
- Aboriginal language learning
- educational systems
- pedagogy of professionals and practitioners
- technology and learning

CCL will work with the knowledge centre to identify pan-Canadian indicators of Aboriginal learning that capture a more holistic view of lifelong learning. The objective will be to redefine how success is measured for Aboriginal Peoples by developing indicators that reflect the goals and aspirations of First Nations, Métis and Inuit peoples.

By redefining the measurement of success for Aboriginal Peoples, this work will help identify the learning conditions that foster economic and social success in Aboriginal communities.

<sup>102</sup> Canada. Royal Commission on Aboriginal Peoples. *Report of Royal Commission on Aboriginal Peoples* Vol. 3, 1996.

<sup>103</sup> Assembly of First Nations. *A First Nations Approach to Indicators*, Submitted to the Aboriginal Policy Research Conference (Ottawa: March 21, 2006).

<sup>104</sup> Wotherspoon, Terry, and Bernard Schissel. "Marginalization, Decolonization and Voice: Prospects for aboriginal education in Canada," *Pan-Canadian education research agenda*, Lenoir, Y., et al., eds. (Ottawa: Canadian Society for Studies in Education, 2000). pp. 193–214.



### SPECIAL FEATURE

*"It would be wrong to dismiss the importance of roads, railroads, power plants, mills, and the other familiar furniture of economic development ... but we are coming to realize ... that there is a certain sterility in economic monuments that stand alone in a sea of illiteracy. Conquest of illiteracy comes first."*

— John Kenneth Galbraith, *The Affluent Society* (1958)

## 6.1 Introduction

There are important things every Canadian needs to know about literacy. First of all, literacy skills are the tools individuals use to build the solid foundation required to live a life of learning. The strength or weakness of that foundation affects a person's life chances by either expanding or contracting the range of opportunities open to them.

It is also important for Canadians to know that literacy skills are not fixed for life by schooling. Literacy skills are maintained, enhanced or diminished depending upon the social and economic demands for their use. Simply put, you either use these skills or you lose them. Adults who possess high levels of skill and who use their skills a lot, maintain or even enhance their skills throughout life. However adults who leave school with relatively low literacy and adults who are not required to use their skills or who chose not to use them, risk losing the skills that they acquired through education.

Canada's literacy stakes are high. Literacy is an essential part of the fabric of modern societies, a thread that links all aspects of life and living in our contemporary world. Its reach is extensive and complex, influencing how fully and effectively a person is able to engage in the social and economic life of his or her community.<sup>1</sup>

For example, literacy provides access to learning opportunities, which lead to better employment<sup>2</sup> and greater financial rewards.<sup>3</sup> Literacy also affects social status, cultural expression, linguistic survival, access to health care and the effective delivery of social services.<sup>4</sup> High rates of literacy are an imperative for democratic societies, in which citizens must be able to absorb and use complex information to understand often difficult issues in order to make effective, informed electoral choices.

### 6.1.1 CCL'S INTEREST IN LITERACY

The impact of literacy on our lives cannot be underestimated. Literacy is especially important for success in education and lifelong learning. That is why the Canadian Council on Learning (CCL) identifies literacy as one of its key learning issues or *crosscutting themes*. Since its inception, CCL has recognized the relevance of literacy to all of its work and has made literacy a priority across its entire agenda.

#### LITERACY AND CCL

*Literacy is interwoven through the full spectrum of CCL's work, both in its narrower sense—the reading, writing and numeracy skills needed to cope with everyday tasks—and in its broader, more nuanced, sense that recognizes the multiple literacies required to thrive in a knowledge economy. With its five knowledge centres—encompassing early childhood learning, health-related learning, Aboriginal learning, work-related learning and adult learning—CCL will work closely with policy-makers, researchers and learning practitioners to identify those areas in which it can most effectively support the extensive work being undertaken in the field of literacy in Canada.*

#### CCL's crosscutting themes

- Culture
- E-learning
- French minority-language settings
- Gender
- Literacy

1 For a discussion of this point see Lankshear, Colin. "Introduction," *Literacy and the New Work Order* (London: National Institute of Adult Continuing Education, 1998). pp. 1-8.

2 Boothby, Daniel. *Literacy Skills: Occupational Assignment and the Returns to Over- and Under-Education* (Ottawa: Statistics Canada and Human Resources Development Canada, January 2002).

3 Osberg, Lars. *Schooling, Literacy and Individual Earnings* (Ottawa: Statistics Canada and Human Resources Development Canada, June 2000). Also, Green, David A. and W. Craig Riddell. *Literacy, Numeracy and Labour Market Outcomes in Canada* (Ottawa: Statistics Canada and Human Resources Development Canada, January 2001).

4 OECD and Statistics Canada. *Literacy Skills For the Knowledge Society* (Paris and Ottawa: 1997). p. 107.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

The core of this agenda is a commitment to show Canadians how learning and literacy contribute to society. The literacy theme is woven throughout the functional mandates of all five of CCL's knowledge centres. These centres conduct research, monitor progress and share knowledge on such subjects as early childhood literacy, health literacy, Aboriginal literacies, workplace literacy and adult literacy.

The Council intends to report annually on literacy and its other crosscutting themes. This special feature you are reading presents CCL's first overview of Canada's literacy landscape. The goal is to increase the general public's understanding of the issues and to promote collaboration among policy-makers, researchers and educators in finding solutions to Canada's literacy challenges.

## CCL's knowledge centres

- Aboriginal learning
- Early childhood learning
- Adult learning
- Health and learning
- Work and learning

The Council firmly believes that Canada's literacy challenges will not be met without the active involvement of all sectors of society. While governments can provide leadership and resources, they cannot solve these problems on their own. The commitment and efforts of families and individuals, and of the private and non-governmental sectors are also required.

## 6.1.2 THE REPORT'S OBJECTIVES

This special feature has six objectives. The first is to provide a contemporary definition of literacy. Just as societies have evolved in response to an increasingly knowledge-intensive and technology-driven world, so too has the meaning of the word *literacy*.

The second objective is to introduce Canada's *literacy facts of life*. Canadians need to know why literacy is important to them, how we stack up internationally and what Canada's skills profile may look like in the medium-term future.

The third is to illustrate the scope of Canada's literacy challenge by presenting a particularly critical issue in each of the following subject areas: Aboriginal literacy, early childhood literacy, adult literacy, and work and literacy.

The fourth is to use *health literacy* to illustrate the importance of literacy in day-to-day living. In exploring the phrase *literacy for life* this feature suggests that literacy is not a theoretical construct or a set of tools to be used only occasionally; rather literacy is a key ingredient in living a full and satisfying life in a modern society.

The fifth is to look at literacy from a global perspective. CCL is interested in learning from promising models and practices identified in other countries' efforts to promote the development of higher literacy skills among pre-school and school-aged children, youth and adults.

The sixth and final objective is to explain why literacy should be a public policy imperative for Canada and to suggest what governments, businesses, employees, unions, educators, families and individuals can do to advance literacy.

## 6.1.3 THE THEME OF THIS REPORT

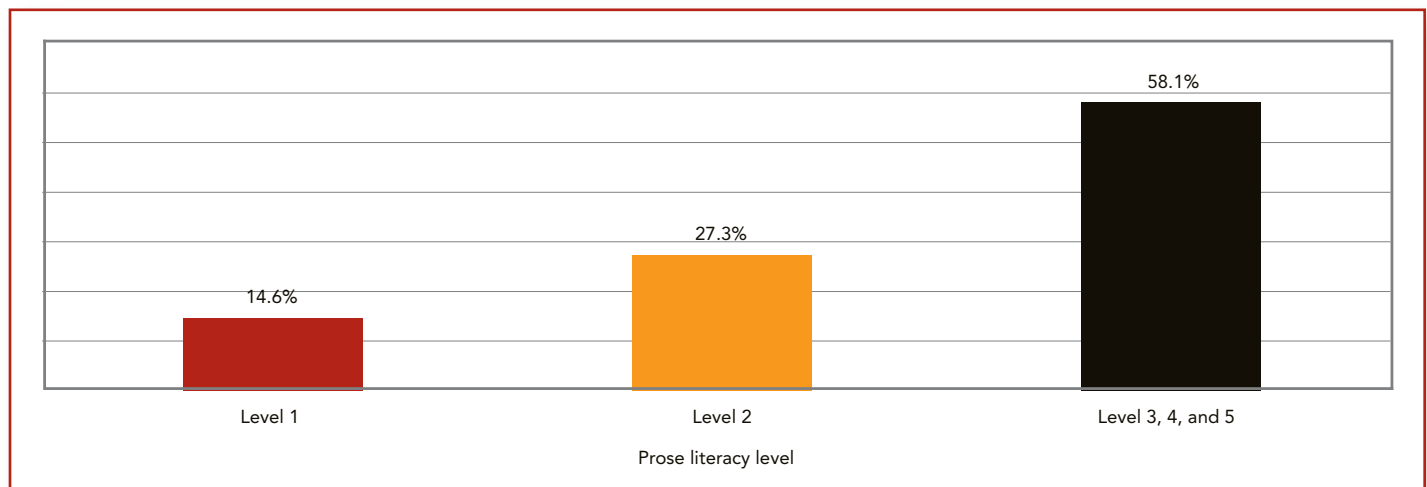
Canadians generally assume that our country does not have a literacy problem. However, despite our educational privileges, including universal primary and secondary schooling, Canada does face many literacy challenges.

As this special feature will explain, two major international literacy surveys, one completed in 1994 and the other in 2003, have revealed that more than four in 10 Canadian adults (people aged 16 to 65) have literacy skills below the international standard considered necessary for an individual to cope in a modern society and economy. This figure remained virtually unchanged between the two surveys, even though the quality of Canadian education has been rising and Canadians, on average, now have higher levels of educational attainment than did previous generations.

Figure 6.1 provides an illustration of the distribution of literacy skills across the adult population in Canada in 2003. Red depicts level one, the lowest level of literacy proficiency, while orange is level two, which is also below the level of proficiency considered to be the threshold of skill required to participate fully in a modern society and economy. Black depicts level three and above.



Fig. 6.1 **Distribution of literacy skill by level**  
Percentage of the population by prose literacy, ages 16–65, 2003



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

These surveys also revealed that the proportion of Canadian adults with low literacy skills remains relatively high compared to adults in other countries. Canadian adults have literacy skills that are in the middle range of those countries' scores. The evidence also suggests that Canadians' literacy skills decline over the course of their lives owing to lack of use.

The central theme of this special report, then, is that there is no room for complacency when it comes to Canada's literacy challenges. The report also provides an analysis of some of the particular literacy challenges faced by Aboriginal people, recent immigrants, and seniors, among others.

## 6.2 The meaning of literacy in Canada

It is important to be precise when using the term literacy. The way the word is defined determines what gets identified as a literacy issue, how policies are devised to respond to those issues, how programs are designed to implement policy and which indicators are used to measure results.

Those looking for a simple definition of literacy will be disappointed. There is no single answer to the question, *What does literacy mean?* The reason is that the idea of literacy is not static but constantly changing. The result is that increasingly complex definitions of literacy have emerged. A number of these definitions are used in this paper because they provide insights into the complexity of literacy issues in Canada.

### 6.2.1 BASIC LITERACY

Basic literacy is, as the phrase suggests, the entry point for this discussion. It is literacy in its simplest form:

*" ... learning to read and write (text and numbers), reading and writing to learn, and developing these skills and using them effectively for meeting basic needs."<sup>5</sup>*

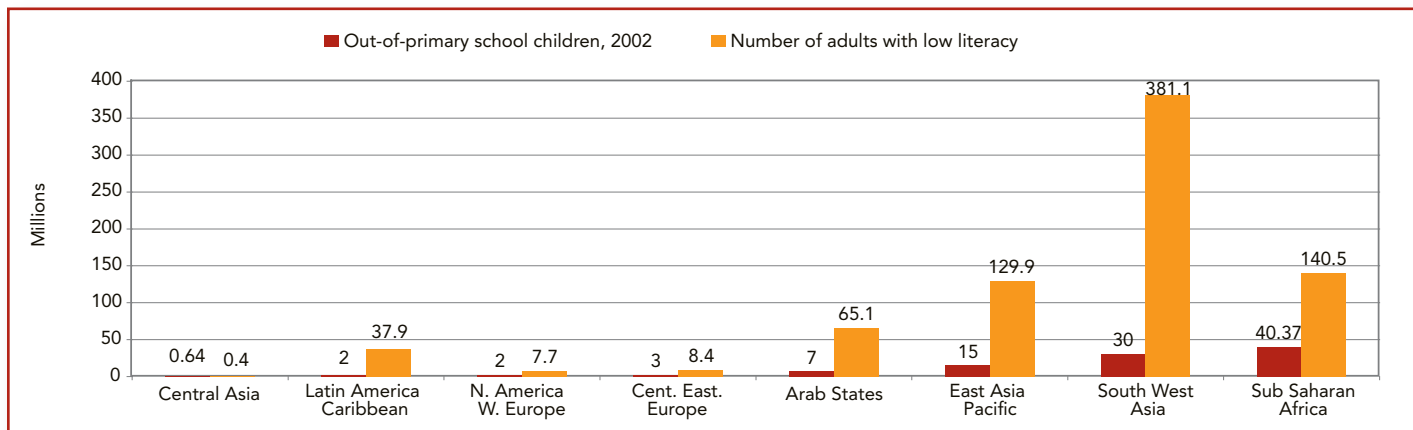
There is a common misconception that basic literacy is an absolute state—that a person is either literate or not. In Canada that usually translates into an assumption that most of us are literate, and that illiteracy is not a problem here. While there are not many Canadians who are truly illiterate, there are many adults with low literacy skills. This issue is explained in detail further on in this chapter.

5 International Council for Adult Education. *Agenda For the Future: Six Years Later*, Presentation to CONFITEA+6, a UNESCO review conference on Adult Education and 6 Literacy (Bangkok, Thailand: Sept. 8–11, 2003)

# LEARNING AND LITERACY: CANADA'S CHALLENGES

The expression *basic literacy* is vitally relevant to those living in the third world countries that cannot provide universal access to learning. That is why there is an urgent humanitarian need to support basic literacy in many developing countries. UNESCO currently estimates that there are more than 770 million illiterate adults<sup>6</sup> including approximately 133 million illiterate young people (aged 15 to 24),<sup>7</sup> around the globe. In addition, about 100 million children still do not have access to education and do not go to school.<sup>8</sup> Figure 6.2 depicts the geographic distribution of these populations.

Fig. 6.2 **Number of adults with low literacy, 2000–2004 and children who are out of primary school, 2002**



Source: United Nations Educational, Scientific and Cultural Organization. *Literacy for Life: Education for All Global Monitoring Report 2006* (Paris: UNESCO Publishing, 2005)

Such statistics prompted the launch of the United Nations Literacy Decade (UNLD)<sup>9</sup> in 2003. The Decade, which ends in 2012, reflects a belief in education as a fundamental human right<sup>10</sup> and a conviction that every person needs to have the opportunity to develop literacy skills.

The UN has identified special themes for attention every two years throughout the Decade. These priorities speak eloquently about the powerful impact basic literacy has on the human condition.

## United Nations Literacy Decades themes

- Literacy and gender: 2003–2004
- Literacy and sustainable development: 2005–2006
- Literacy and health: 2007–2008
- Literacy and empowerment: 2009–2010
- Literacy and peace: 2011–2012

## 6.2.2 FUNCTIONAL LITERACY

In Canada, where primary and secondary schooling have long been compulsory and literacy rates (and the economic and social demands to use literacy skills) are relatively high in comparison to other countries, the challenge is to manage low or insufficient literacy rather

than illiteracy. The reason is that the globalization of financial and commodity markets, free trade, rapid advances in communications and information technologies, and the emergence of knowledge-based, information-intensive societies and economies have increased the global appetite for more sophisticated literacy skills, stimulating increased international competition for investments in highly competent human capital.

Because of these pressures, the concept of literacy has grown beyond basic reading and writing to include the ability to apply varying levels of analysis, understand degrees of abstraction, manipulate symbols in a more sophisticated style, apply theoretical knowledge and manage other complex life skills. This has been accompanied by a focus on the links between literacy and the ability to function socially, culturally, economically and politically, as citizens.<sup>11</sup>

*Functional literacy* is the core concept in the International Adult Literacy Survey (IALS) and the Adult Literacy and Life Skills Programme (ALL). IALS was developed to provide a direct assessment of the literacy skills of populations in 24 jurisdictions, looking at literacy in three domains: prose, document and quantitative literacy. IALS defines literacy as:

6 UNESCO. *Literacy for Life: Education for All Global Monitoring Report 2006* (Paris: UNESCO Publishing, 2005). Table 2A. p.287.

7 *Ibid.*, Table 2A, p. 287.

8 *Ibid.*, Table 5, p. 319.

9 United Nations General Assembly. *United Nations Literacy Decade: Education for All*, Adopted and proclaimed by General Assembly resolution 56/116 of January 2002 (New York: 2002).

10 United Nations General Assembly, Universal Declaration of Human Rights, Adopted and proclaimed by General Assembly resolution 217 A (III) of Dec. 10, 1948, Article 26 (New York: United Nations, December 1948).

11 Wagner, Daniel A. *Literacy and Adult Education—Thematic Studies* (Paris: UNESCO, 2001). p. 4.

*“... the ability to understand and employ printed information in daily activities at home, at work, and in the community—to achieve one’s goals and to develop one’s knowledge and potential.”<sup>12</sup>*

The Adult Literacy and Life Skills Survey (ALL) includes a fourth domain called problem solving, which it describes as:

*“... the integration of the knowledge and skills measured by the literacy and numeracy domains and their application to new situations. It also implicates basic logical tools needed to provide effective solution strategies to the problems presented in everyday life.”<sup>13</sup>*

Functional literacy is increasingly central to the national literacy strategies of many developed countries, particularly in light of the dynamic relationship researchers have found between literacy and individuals’ abilities to function effectively in the economy.

### 6.2.3 PLURAL LITERACY

Plural literacy extends the functional view to include more of the social and cultural aspects of life’s experiences. UNESCO is using it for the Literacy Decade, noting that:

*“... a plural view of literacy recognizes that there are many literacy practices that are embedded in social, political, and cultural processes, personal circumstances and socio-economic structures.”<sup>14</sup>*

According to UNESCO, the fact that *literacy is plural* implies that people develop and use literacy for different purposes in different circumstances. Rather than viewing literacy as a fixed set of generic skills (as in basic literacy) or as measurable technical and life skills (as in functional literacy), the plural literacy concept explores the constantly changing social implications of acquiring, developing and using literacy skills.<sup>15</sup>

This plural view of literacy provides insights into Canada’s literacy challenges given our cultural and linguistic diversity. Canada is an officially bilingual (French and English) and multicultural country (which supports the preservation of “Heritage languages”) as well as being home to over fifty First Nations languages. A number of these Aboriginal languages are under threat of extinction.<sup>16</sup> The linguistic survival of Aboriginal languages is one example of why plural literacy is a central issue for Canadians. It raises questions that are important for a wide variety of individuals, communities and cultures living within our borders.

### 6.2.4 MULTIPLE LITERACIES

Another concept, *multiple literacies*, is widely used in Canada. Expressions such as computer, environmental, visual, media, economic and scientific literacy are commonly employed. Each one of these literacies is about the power to identify and decode, to evaluate and communicate. Each includes the ability to reflect on the meaning of symbols, on the feelings and actions they generate, and on the effect they have on others. Multiple literacies refer to the ability to accomplish specific tasks in response to external demands placed on us during our lives, like changes in technology or in our own evolving wishes and aspirations.

The notion of multiple literacies has implications for how broadly we view literacy and it certainly has proved relevant to learning in Canada. Many provinces have developed school curricula in economic, computer, cultural and media literacy, for example. These programs flag the importance of acquiring subject- or technology-related skills. Educational institutions increasingly rely on computers for instruction and, of course, computer use is a subject of instruction itself and a cornerstone in the emerging field of e-learning.

It is important to acknowledge that these new perspectives on literacy sometimes obscure the fact that other literacies cannot be developed without prior mastery of basic literacy.

### 6.2.5 CCL’S APPROACH TO LITERACY

CCL’s thinking on this subject reflects the evolving nature of literacy. The organization starts from the premise that literacy, in its fullest form, is the foundation for learning and has implications over a lifetime. That is why CCL defines literacy and its relationship to the organization’s work in these words:

*“Literacy is interwoven through the full spectrum of CCL’s work, both in the term’s narrower sense—the reading, writing and numeracy skills needed to cope with everyday tasks—and in its broader, more nuanced, sense that recognizes the multiple literacies required to thrive in a knowledge economy.”*

A full appreciation of what literacy means is important. It is only when one understands literacy in its various manifestations that rigorous analysis can be undertaken and effective decisions made.

<sup>12</sup> Statistics Canada and OECD. *Literacy Skills for the Knowledge Society: Further Results of the International Adult Literacy Survey* (Ottawa and Paris: 1997). p. 14.

<sup>13</sup> Human Resources and Skills Development Canada and Statistics Canada. *Building on our Competencies: Canadian Results of the International Adult Literacy and Life Skills Survey* (Ottawa: Ministry of Industry, 2005). pp. 13–14.

<sup>14</sup> UNESCO. *Literacy—Multiple Meanings and Dimensions*, Education Sector Position Paper (Unpublished). pp. 2–3.

<sup>15</sup> *Ibid.*, p. 8.

<sup>16</sup> Canada. House of Commons. “Raising Adult Literacy Skills: The Need for A Pan-Canadian Response,” *Report of the Standing Committee on Human Resources Development and the Status of Persons with Disabilities* (Ottawa: Communication Canada Publishing, 2003). p. 28.

## 6.3 The literacy facts of life

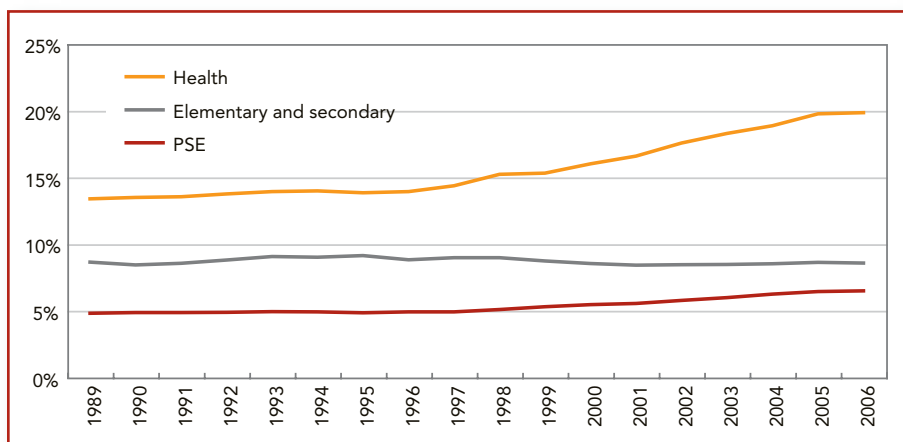
The relevance of literacy to Canadians can be traced back to fundamental considerations such as economic self-interest, fairness and value for money.

Literacy, and the public policies that relate to literacy, are linked to economic self-interest because literacy is an indispensable tool for individuals and nations to compete successfully in the rapidly emerging global knowledge economy. Because Canada earns its living by trading with others, skill-based barriers to competitiveness and productivity growth are of concern to economic policy.

Much of public policy, and the debate regarding public investment in learning skills in Canada, are focussed on raising our levels of post-secondary education and supporting innovation and research. In 2002, governments spent \$64.5 billion on all levels of education, which represented 14.7% of total public expenditures.<sup>17</sup>

Figure 6.3 depicts the percentage of public expenditure on health, elementary and secondary education, and post-secondary education from 1989 to 2006. While education spending is considerable, it is significantly outstripped by expenditures on health care.

Fig. 6.3 **Percentage of public expenditure on health, elementary, secondary and post-secondary education, 1989–2006**



Source: Statistics Canada. CANSIM, Table: 385-0001

The chart also indicates that between 1997–1998 and 2001–2002 combined, federal, provincial/territorial and municipal government expenditures on education grew by 10% at the post-secondary level but by only 3% at the elementary–secondary level.

Increases in private expenditures have followed the same pattern. In 2001–2002, private expenditures had risen to \$10.7 billion, a 19% increase since 1997–1998, and almost four times the increase in public expenditures. Of this amount, \$3.3 billion was spent at the elementary–secondary level and \$7.4 billion at the post-secondary level.

Whether implicitly or explicitly, this focus on education generally, but post-secondary education in particular, rests on untested assumptions about what will drive economic growth in the future, specifically about the relative impact that different types of skills will have on the relative economic performance of economies. The arguments for higher literacy levels in the workforce, and for government investments in adult literacy generally, are rooted in the growing realization that in a global economy where markets for capital, technology and knowledge are themselves global, the literacy skills possessed by the average worker may be what determines which countries achieve the highest rates of economic growth.<sup>18</sup>

The evidence suggests that Canada's continued economic success will depend upon raising the average worker's level of literacy and on reducing the proportion of adults with relatively low skills. It also suggests that literacy and post-secondary education are complementary and that both yield the return on investment that drives much of government, business and individual decision-making.

Literacy is linked to fairness because of its impact on employment, income, health and social participation on the part of individuals. Those with high literacy levels can take full advantage of all the opportunities that Canada has to offer, while those with low literacy levels have greater difficulty accessing or fully exploiting those opportunities. Because the negative effects of low literacy are so pronounced in Canada, policies designed to raise literacy skills could play a central role in reducing social inequities in individual health, education, labour market and social outcomes.

17 Council of Ministers of Education, Canada and Statistics Canada. *Education Indicators in Canada: Report of the pan-Canadian Education Indicators Program 2005* (Ottawa: Canada and Statistics Canada, 2005). Table B2.3. Available at [www.statcan.ca](http://www.statcan.ca).

18 Coulombe, Serge, and Jean-François Tremblay. "Public Investment in Skills: Are Canadian Governments Doing Enough," *The Education Papers* (Toronto: C.D. Howe Institute, October 2005). Commentary No. 217. "Specifically, a country's literacy scores rising by one percent relative to the international average is associated with an eventual 2.5 percent relative rise in labour productivity and a 1.5 percent rise in GDP per head. These effects are three times as great as for investment in physical capital. Moreover, the results indicate that raising literacy and numeracy for people at the bottom of the skills distribution is more important to economic growth than producing more highly skilled graduates." p. 2.

Literacy is connected to value because it improves the efficiency of our consumer markets, particularly with regard to public goods and services such as education and health. A case can also be made for public investment in literacy as a way to reduce the demand for public goods. Providing health and educational services to a fully literate population is considerably cheaper than the alternative. Canadian taxpayers would get better value for their tax expenditures and could reduce tax rates without sacrificing programs that support our quality of life.

### 6.3.1 HOW WE STACK UP

Thanks to the *International Adult Literacy Survey* or IALS<sup>19</sup> and the 2003 *International Adult Literacy and Life Skills Survey* (IALSS)<sup>20</sup> we have a fairly comprehensive picture of the literacy skills Canadians possess. In this overview of literacy in Canada material is drawn from both of these documents.

IALS, the first of these surveys, assessed the literacy skills of people aged 16 to 65 in 24 countries in the period between 1994 and 1998. IALS measured three types of literacy<sup>21</sup>:

- **Prose literacy**—the knowledge and skills needed to understand and use information from texts, including editorials, news stories, poems and fiction
- **Document literacy**—the knowledge and skills required to locate and use information contained in various formats like tables, graphs, schedules, charts, forms, and maps
- **Quantitative literacy**—the knowledge and skills required to apply arithmetic operations to numbers embedded in printed materials such as balancing a cheque-book or completing an order form

Each type of literacy was measured on a 500-point scale, broken into five levels of skill (level one being the lowest, level five the highest). The Organisation for Economic Co-operation and Development (OECD) considers IALS level three to be the minimum level of literacy required to participate fully in modern societies and economies.<sup>22</sup>

Of the 24 countries in IALS, Canada ranked fifth on the prose literacy scale behind Sweden, Finland, Norway and the Netherlands. Canada placed in the middle of the pack on the quantitative and document literacy scales. The United States and the United Kingdom scored lower than Canada.

In Canada, 41.4% of adults were at levels one and two on the prose scale (below the OECD threshold of level three). There was a similar percentage on the document (18% on level one and 25% on level two) and on the quantitative scales (17% level one and 26% level two).<sup>23</sup>

A new international report called the *Adult Literacy and Life Skills Survey* (ALL) was released in May 2005,<sup>24</sup> presenting the first round of results on the literacy proficiency of the adult populations of the United States, Switzerland, Norway, Italy, Canada, Bermuda and the Mexican State of Nuevo Leon. This 2003 survey tested more than 23,000 Canadians out of an adult population (aged 16 and over) that had grown to 21,360,683.

The Canadian component of the ALL is the *International Adult Literacy and Life Skills Survey* (IALSS). Its results appeared in November 2005.<sup>25</sup> IALSS provides us with the most recent picture of the literacy skills of Canadians and it builds on the original IALS research and definitions. The newer survey was expanded to profile the skills of adults along four scales: problem solving, numeracy, prose literacy and document literacy. Only the prose and document scale were identical in the two studies and so can be compared. This means that any progress observed between the two surveys can only be measured on these two scales.

The old IALS quantitative literacy scale was renamed *numeracy* and altered to increase its reliability. Consequently, the 2003 findings are not directly comparable with the 1994 results. In addition, a new *problem solving* scale was created. Since it was not part of the 1994 survey, there is no basis for comparison in this domain either. These two domains are defined as follows:

- **Numeracy**—the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to numbers embedded in printed materials, such as balancing an account, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement
- **Problem Solving**—goal-directed thinking and action in situations for which no routine solution procedure is available; the understanding of the problem situation and its step-by-step transformation, based on planning and reasoning<sup>26</sup>

19 The first report, *Literacy, Economy and Society: Results of the First International Literacy Survey*, had data on Canada, Germany, Sweden, the Netherlands, Poland, Switzerland and the United States. Additional estimates for Northern Ireland, Great Britain, Australia, New Zealand and Ireland appear in *Literacy Skills for the Knowledge Society: Further Results of the International Adult Literacy Survey*. Eleven additional countries were included in *Literacy for the Information Age: Final Results of the International Adult Literacy Survey*. A separate report on IALS data for Canada was published in *Reading the Future: A Portrait of Literacy in Canada*.

20 Human Resources and Skills Development Canada and Statistics Canada. *Building on Our Competencies: Canadian Results of the International Adult Literacy Survey* (Ottawa: November 2005). Catalogue No. 89-617-XIE.

21 Statistics Canada and the Organisation for Economic Co-operation and Development. *Literacy Skills for the Knowledge Society* (Ottawa and Paris: 1997). p. 14.

22 Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005).

23 Statistics Canada and Human Resources and Development Canada. *Reading the Future: A Portrait of Literacy in Canada* (Ottawa: 1996). Table 1.3, p. 22.

24 Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005).

25 Statistics Canada and Human Resources and Skills Development Canada. *Building on Our Competencies: Canadian Results of the International Adult Literacy Survey* (Ottawa: November 2005). Catalogue No. 89-617-XIE.

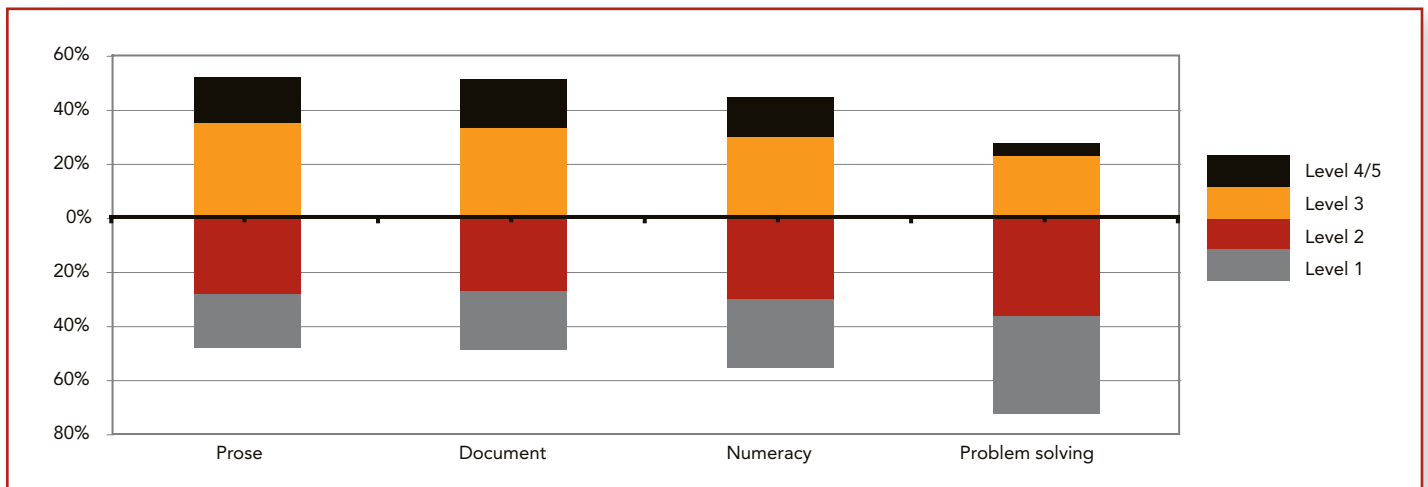
26 *Ibid.*, p. 13.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

IALSS revealed that, during the nine-year period between the two studies, Canada's average literacy scores remained substantially the same. The average prose scale score was 278.8 in 1994 and increased by only two points to 280.8 in 2003. In 1994, 41.4% of working-age Canadian adults were at levels one and two on the prose scale, scoring lower than the level-three international standard. In 2003, the percentage of the population at levels one and two on the prose scale was virtually unchanged, at 41.9%.

Figure 6.4 presents the 2003 data for Canada on the four IALSS scales: prose, document, numeracy and problem solving. Those below the line scored at levels one and two while those above the line were at levels three, four and five. Every country surveyed had a literacy problem, even the highest-scoring country, Sweden, where 28% of adults were at the lowest levels (prose scale one and two).

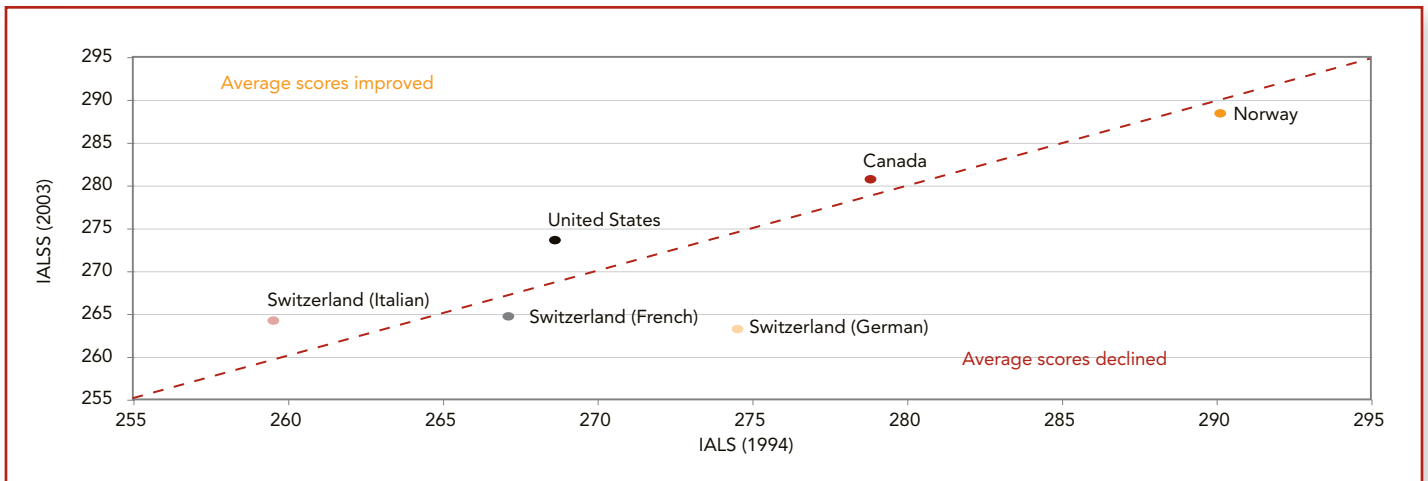
**Fig 6.4 Distribution of skill levels in Canada, 2003**  
Percentage of population at each skill level, ages 16–65



Source: Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005)

Figure 6.5 shows that while the percentage of Canadians at levels one and two remained unchanged, overall Canada's average prose literacy scores improved over the nine-year period between the two surveys.

**Fig 6.5 Change in average prose skill level**  
Average prose score for population, ages 16–65, 1994 versus 2003



Source: Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005)

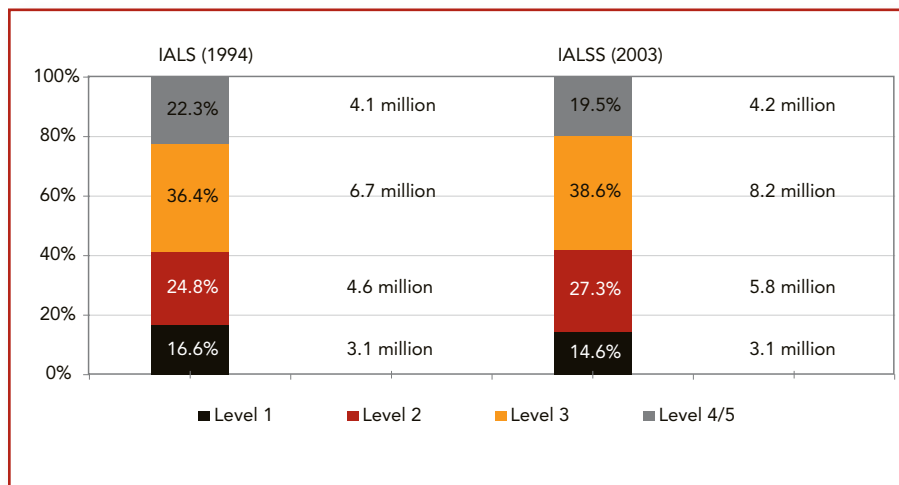
In 2003, 58% of Canadian adults scored above level three on the document literacy scale. These are people who met or exceeded the international standard. By isolating just those adults who were employed, the score increases to about 62%. This is a secure base upon which to build skills for the knowledge economy.

Even though the percentage scores have not changed appreciably, there were some shifts in literacy results when expressed in population terms rather than as percentages.

Figure 6.5 depicts literacy skill levels in Canada in 1994 and in 2003. There were 18.5 million working-age Canadians in 1994, a figure that rose to 21.4 million by 2003. The fact that 58% were at level three and above in both the 1994 and the 2003 surveys might suggest that there was no change. This unchanged percentage masks the reality that the number of people at these levels rose from 10.8 million in 1994 to 12.4 million in 2003, up by 1.6 million.

However, the number of people with low literacy (levels one and two) increased from 7.7 million to 8.9 million, a rise of 1.2 million. That means that we have been achieving literacy improvements at a rate slower than population growth. That has to change if Canada is to address its literacy challenges effectively. As Figure 6.6 shows, the number of adults at level one remained at 3.1 million. The number at level two increased significantly, from 4.6 million to 5.8 million.

**Fig. 6.6 Distribution of skill levels, IALS and IALSS**  
 Percentage of population by prose literacy level and population size, ages 16–65, 1994 and 2003



Source: International Adult Literacy Survey (1994) and International Adult Literacy and Life Skills Survey (2003)  
 Note: These figures do not include the three territories

This chart also reveals that all of the growth in higher level literacy skills came at level three, rising from 36.4% of the adult population (aged 16 to 65) in 1994 to 38.6% in 2003. However, Canada’s performance at levels four and five decreased in percentage terms from 22.3% to 19.5%. This decline may seem insignificant, but the downward trend is troubling because a

knowledge economy cannot risk the loss of highly skilled workers.

As noted, those below level three are people whose skills are considered insufficient for a knowledge-intensive economy and society. An examination of what has happened to the populations scoring below level three on the two surveys reveals some interesting facts.

As reported earlier, in 1994, 41.4% of adult Canadians were below level three on the prose scale. At that time they numbered about 8 million. However, owing to population growth, by 2003 the 41.9% at levels one and two on the prose scale now represented close to 9 million Canadians. Three provinces, British Columbia, Quebec and Ontario, have, in total, 7 million of the 9 million people with low literacy.

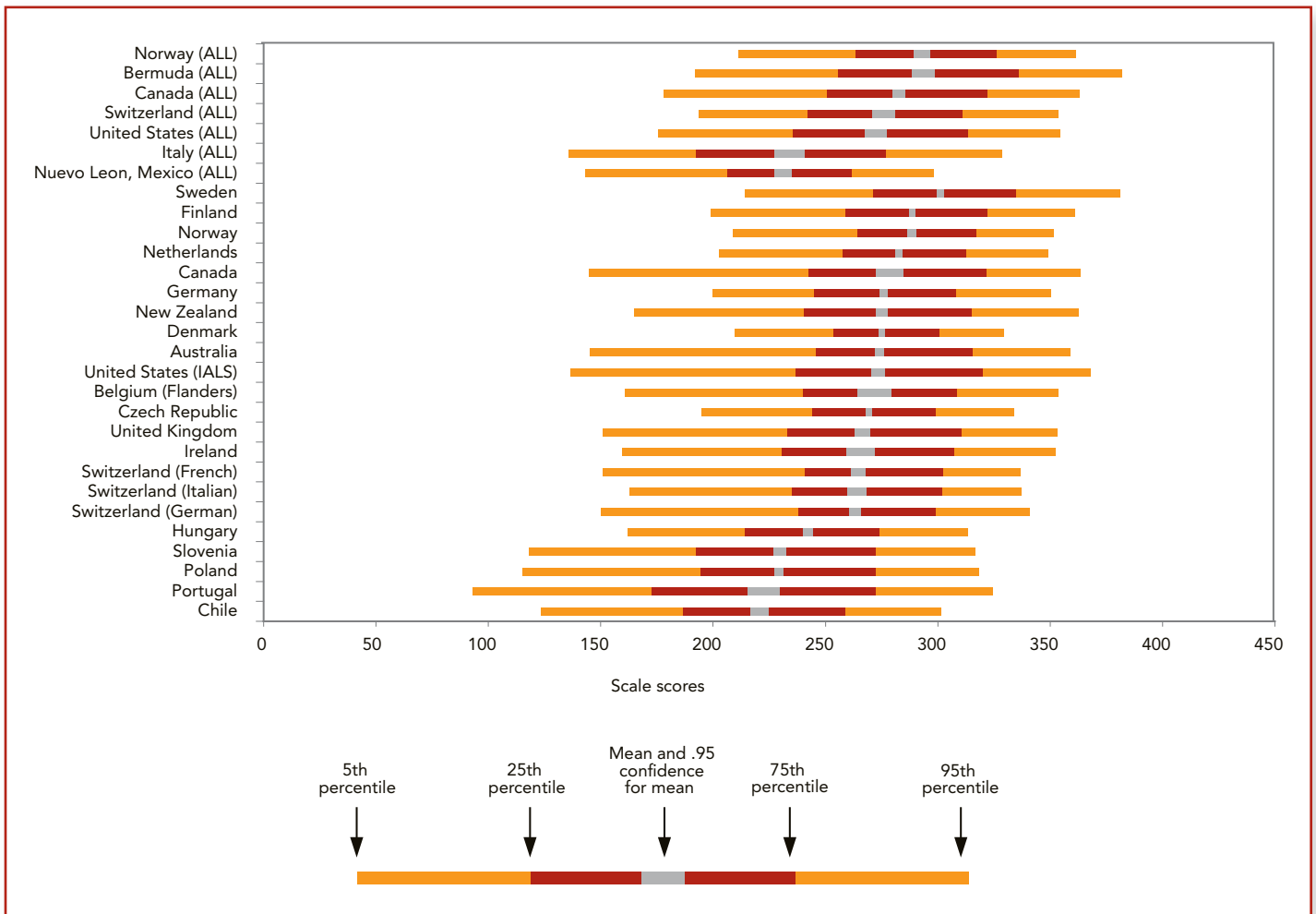
Interestingly, the number of people at level one on the two surveys—3.1 million—was unchanged. Because the overall population grew, the percentage of the population at level one declined from 16.6% to 14.6%. Over the same period, the number of people at level two increased both in percentage terms (from 24.8% to 27.3%) and in absolute numbers (from 4.6 million to 5.8 million).

It is instructive to review how Canada’s literacy levels compare to those of our competitors. As the following chart shows, Canada’s average literacy level is relatively high, while still falling short of the very literate Nordic countries. It is because Canada has a relatively wide range of scores compared to many countries, as illustrated in Figure 6.7, that literacy has such a profound impact on individual health, labour market, educational and social outcomes in Canada.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

Fig. 6.7 **Distribution of literacy scores**

Mean scores with .95 confidence interval and scores at 5th, 25th, 75th, and 95th percentiles on the prose literacy scale, 1994–1998, 2003



Source: Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005)

## 6.3.2 HOW THE LEVEL OF SKILL IS EXPECTED TO CHANGE

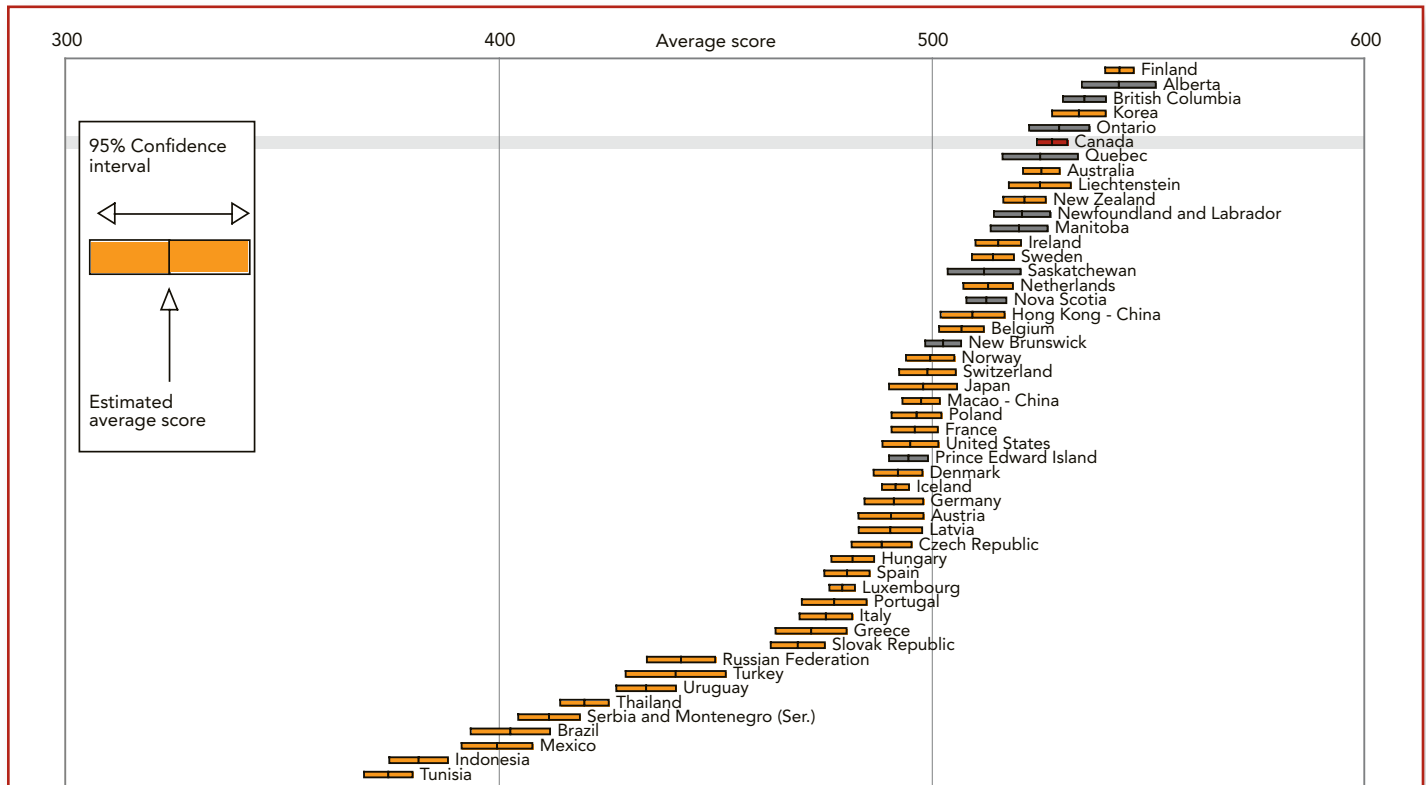
It is also useful to employ the available data to reflect on how the level and distribution of skill available to the Canadian economy might change over the medium term in response to various skill flows, including:

- the skills of youth graduating from our secondary schools
- the education and skills that immigrants bring to the country
- the skills gained through experience and adult learning

On the bright side, the average literacy level of Canada's youth is among the highest in the world. Figures 6.8A, B and C show where Canadian 15-year-olds, by province and nationally, placed internationally in tests of their proficiency in reading, mathematics and problem solving. It is worrisome, however, that there are not enough young people coming into the workforce to be able to increase the overall proportion of adults with high skills.

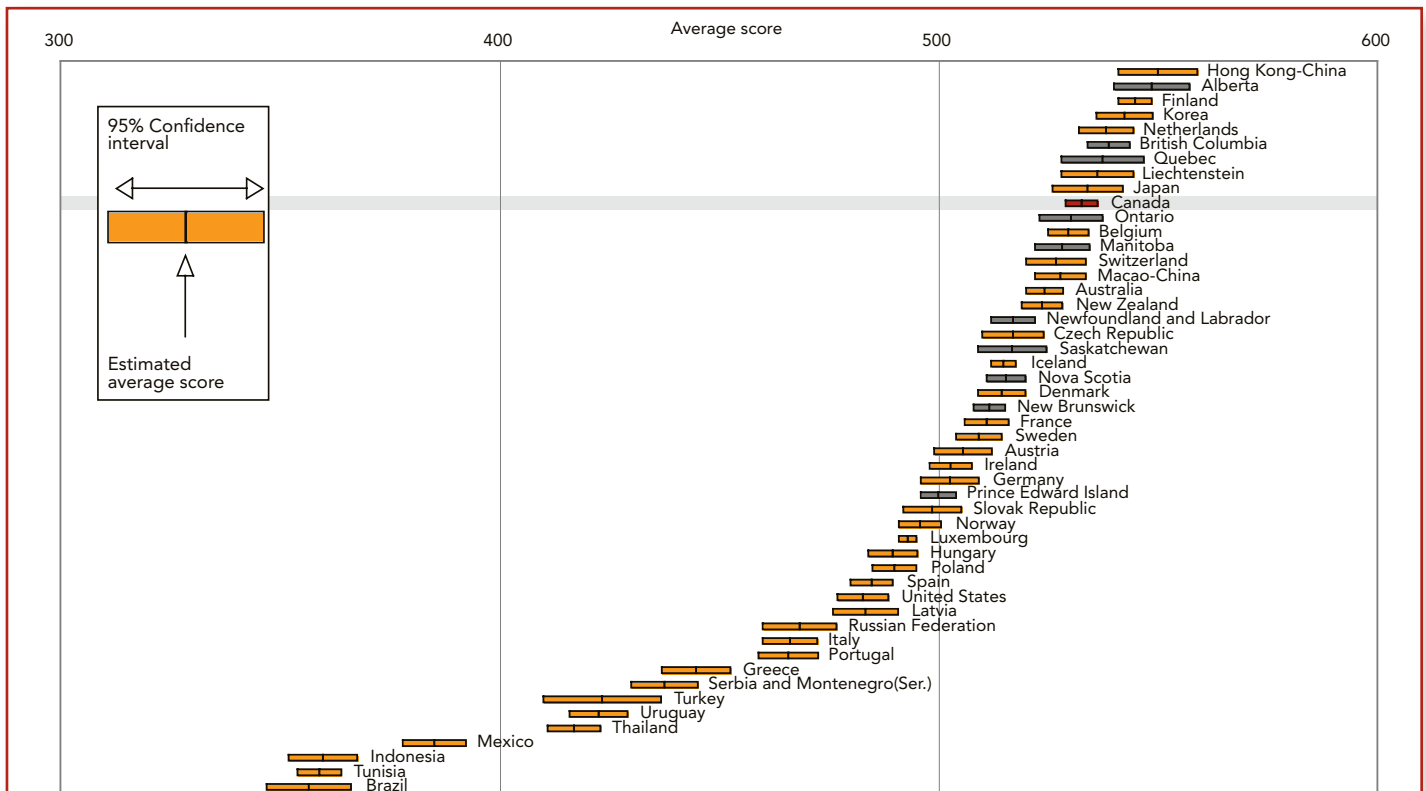


Fig. 6.8A: International and provincial comparisons of reading skills, 15-year-olds, 2003



Source: Programme for International Student Assessment (2003)

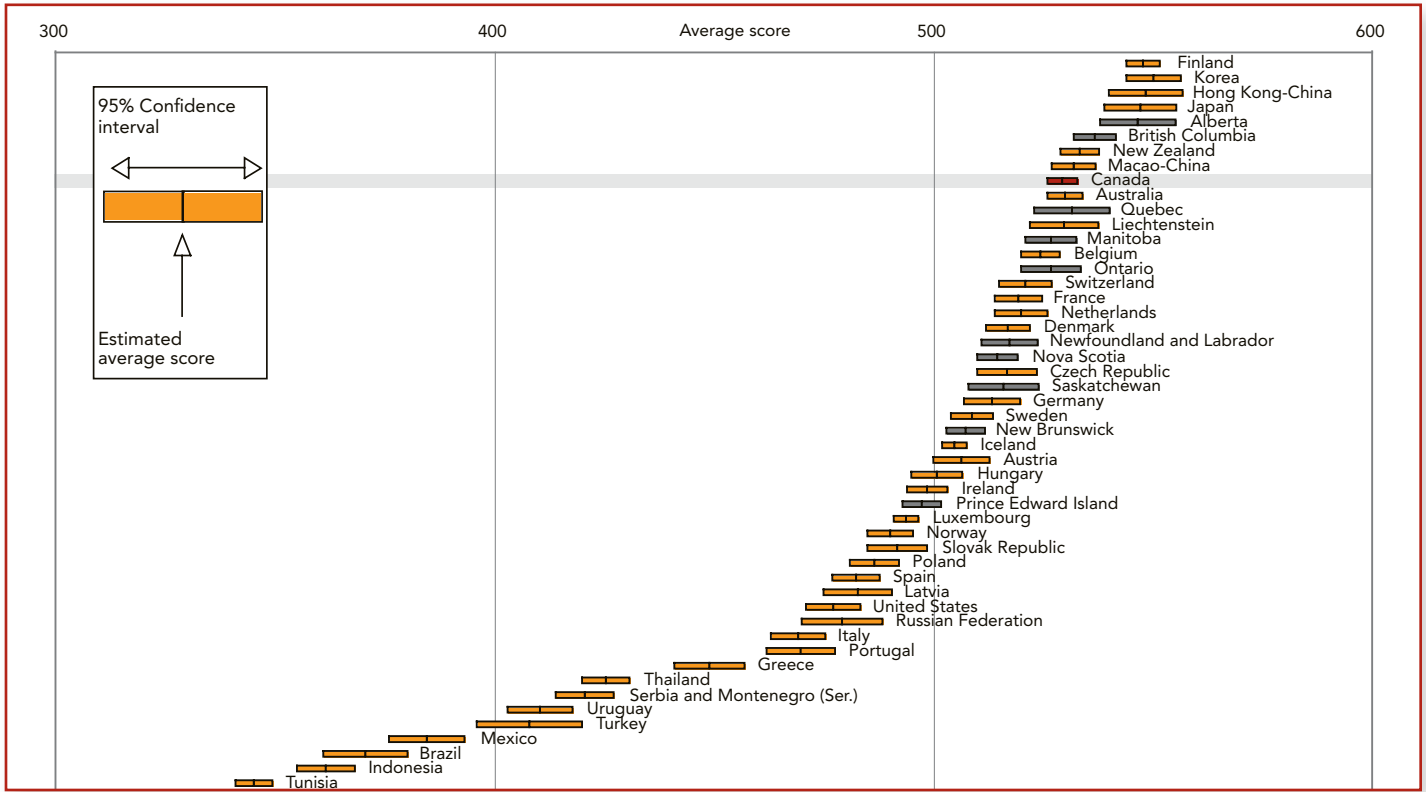
Fig. 6.8B: International and provincial comparisons of mathematics skills, 15-year-olds, 2003



Source: Programme for International Student Assessment (2003)

# LEARNING AND LITERACY: CANADA'S CHALLENGES

Fig. 6.8C: **International and provincial comparisons of problem-solving skills, 15-year-olds, 2003**

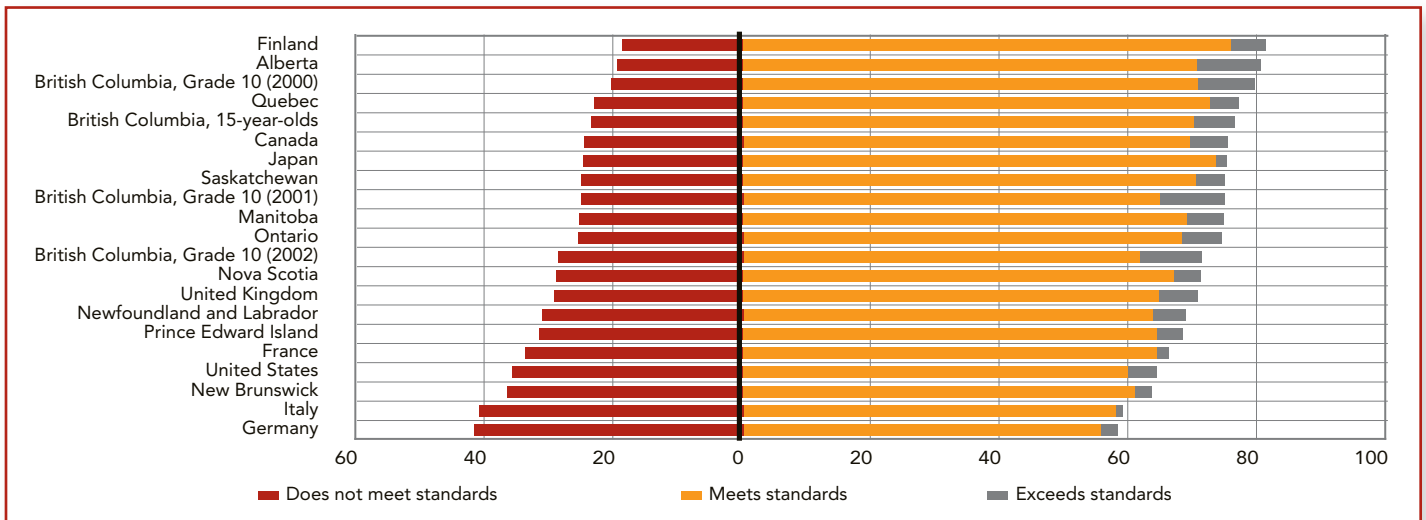


Source: Programme for International Student Assessment (PISA), (2003).

Less comforting is the fact that roughly 20% to 40% of Canadian youth fail to acquire the level of skill believed to be essential to future economic and social success. Figure 6.9 presents the results of a linkage of the PISA data to British Columbia's reading standard. Canadian students from provincial jurisdictions such as Alberta and British Columbia perform quite well while those from the Atlantic provinces perform less well. Finland outperforms Canada, but all other countries on the chart, including the United States, do less well.

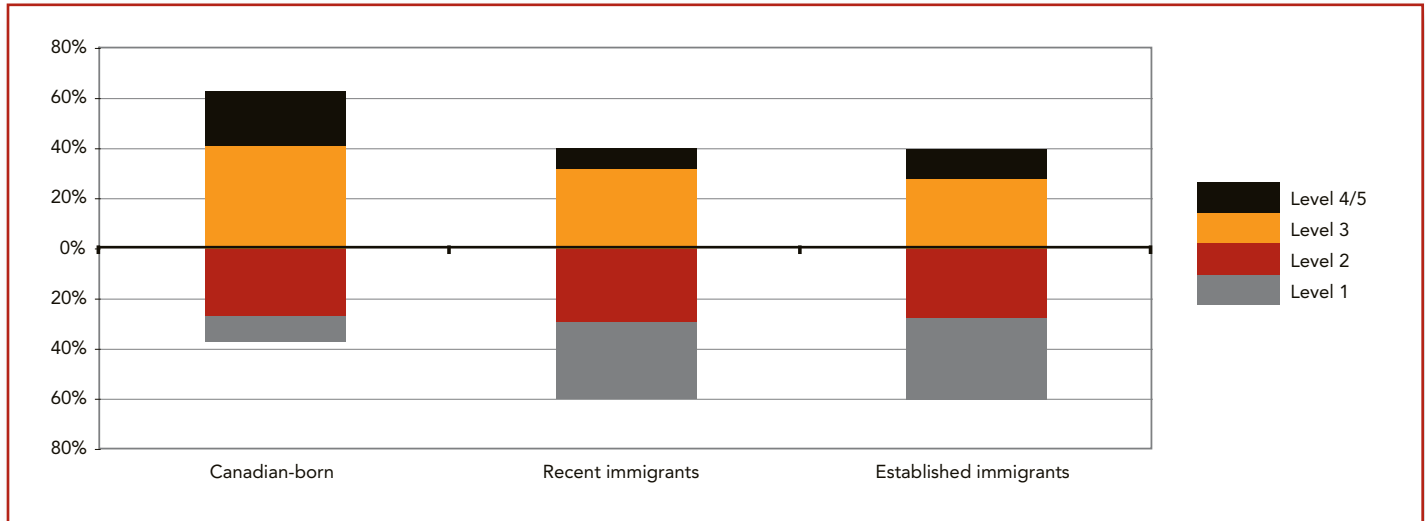
Fig. 6.9: **The performance of students on British Columbia's reading standards**

Percentage of 15-year-olds from various jurisdictions attaining British Columbia's reading standards, 2000



Source: Statistics Canada. *Linking provincial student assessments with national and international assessments* (Ottawa: 2003). Catalogue No. 81-595-MIE2003005.

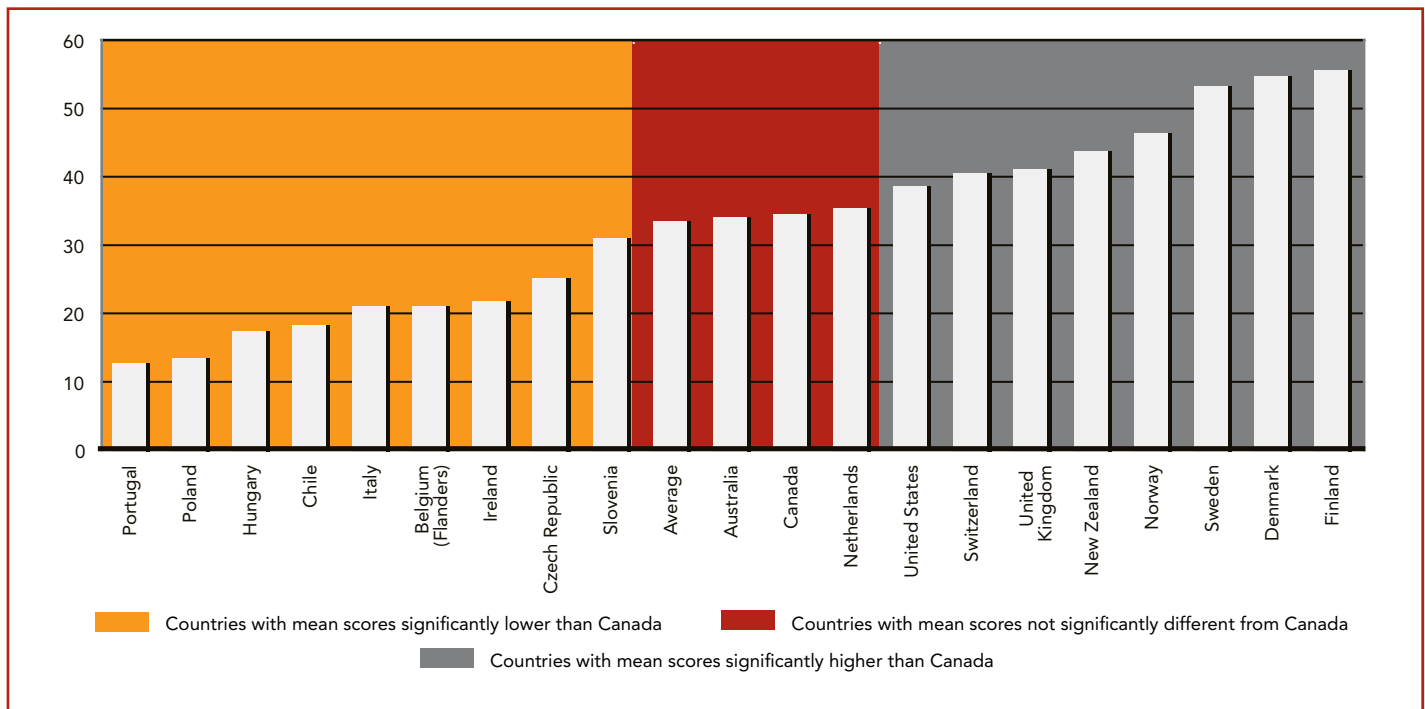
**Fig. 6.10 Comparison of distributions by proficiency level, recent immigrants, established immigrants versus Canadian-born adults**  
 Percentages by prose skill level, recent immigrants ( $\leq 10$  years), established immigrants ( $> 10$  years) and Canadian-born adults, ages 16–65, Canada, 2003



Source: Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005)

Even more worrisome, as Figure 6.10 makes clear, is that a significant proportion of Canada’s immigrants do not have sufficient prose literacy skills in our official languages. The same is true for their numeracy skills. This limits their civic participation and access to economic opportunity.

**Fig. 6.11 Comparisons of participation in adult education and training, ages 16–65, 1994–1998**



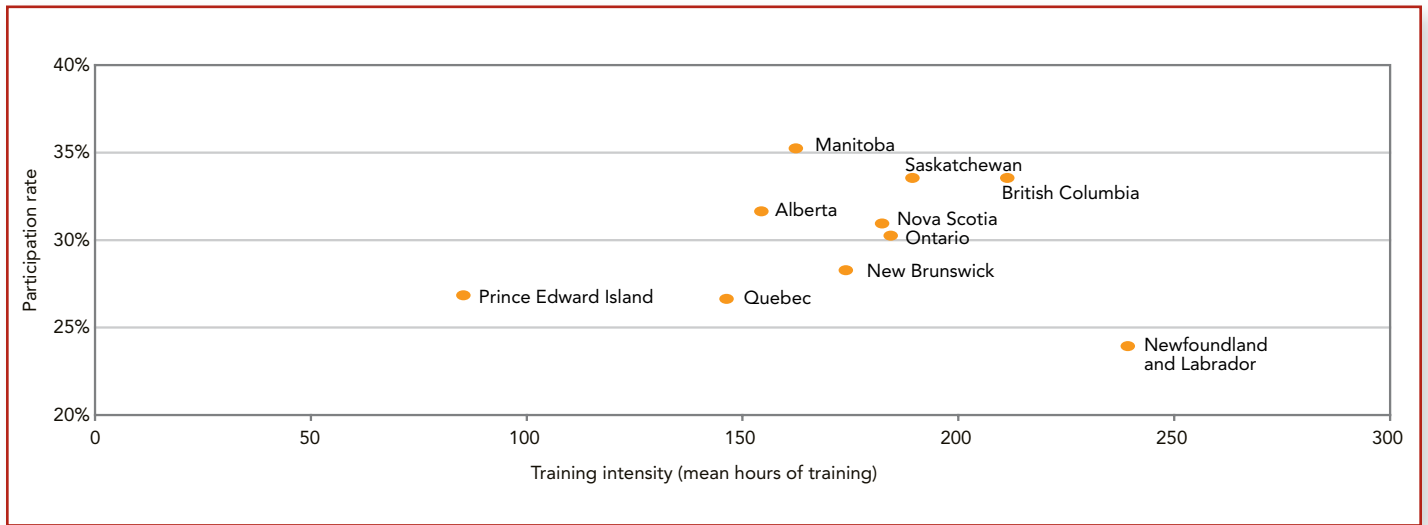
Source: International Adult Literacy Survey, 1994–1998  
 Note: Countries are ranked by the rate of participation. Statistical difference is significant at  $p < .05$ .

# LEARNING AND LITERACY: CANADA'S CHALLENGES

Figure 6.11 shows that the number of Canadians taking adult learning courses, and the duration of training programs, both fall below those of many of our key competitors such as the U.S., the U.K., the Scandinavian countries, New Zealand and Switzerland.

In addition, Canadians have remarkably different opportunities to participate in job-related adult learning, some provinces spreading small numbers of hours over large numbers of people, while others offer large numbers of hours to far fewer participants. Figure 6.12 provides a graphic comparison of the differences between and among provinces in terms of both participation in training and intensity or duration of training. Newfoundland and Labrador, for example, provides fewer learners more hours of training than does Manitoba, which provides a smaller number of hours but offers training to more adult learners.

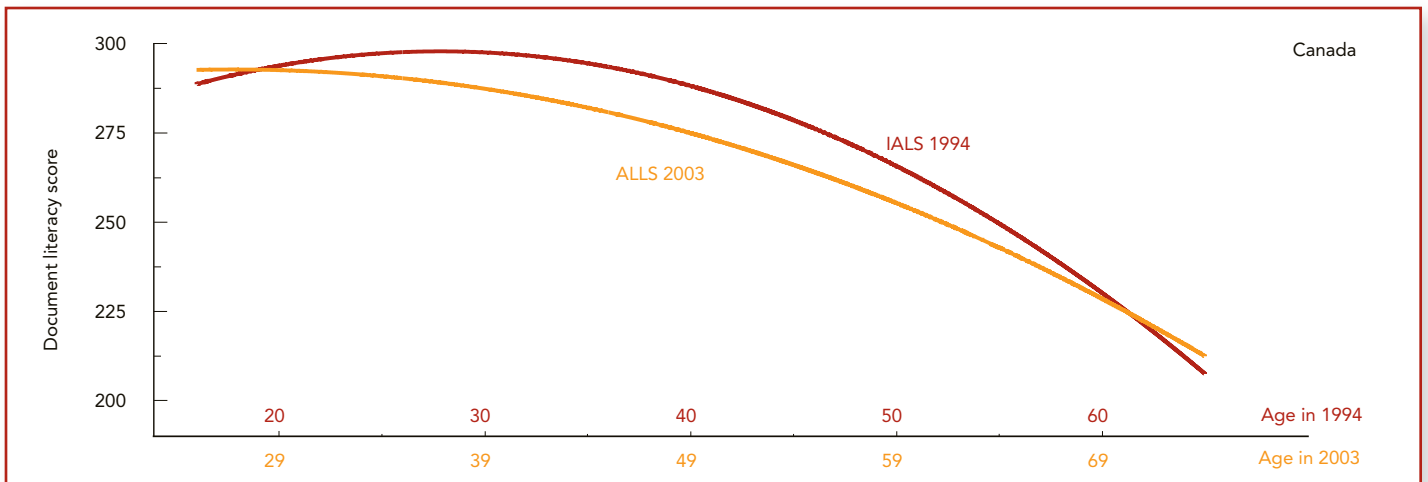
Fig. 6.12 **Comparisons of the incidence and intensity of adult education and training, ages 25–64, 2002**



Source: Statistics Canada, Adult Education and Training Survey (2003)

The available evidence suggests that average literacy levels have not improved over the past decade. The phenomenon of eroding literacy skills among adults denies the labour market access to economically valuable skills and decreases the return on the public's investment in education.

Fig. 6.13: **Skill loss in adulthood**  
Change in average skill level for the cohort aged 16–65 in 1994, Canada



Source: Wilms, D. and T.S. Murray. Gaining and Losing Skills over the Life Course (Ottawa: Statistics Canada, unpublished)

Figure 6.13 reveals that a large number of adult Canadians over the age of 25 had, by 2003, lost a significant proportion of the skills they had exhibited in 1994. Given what these skills cost to acquire in the first place, and the potential benefits that would have accrued to these individuals and their employers if these skills had not been eroded, the magnitude of skill loss is cause for concern. (See Skill Loss in the text box.)

### SKILL LOSS

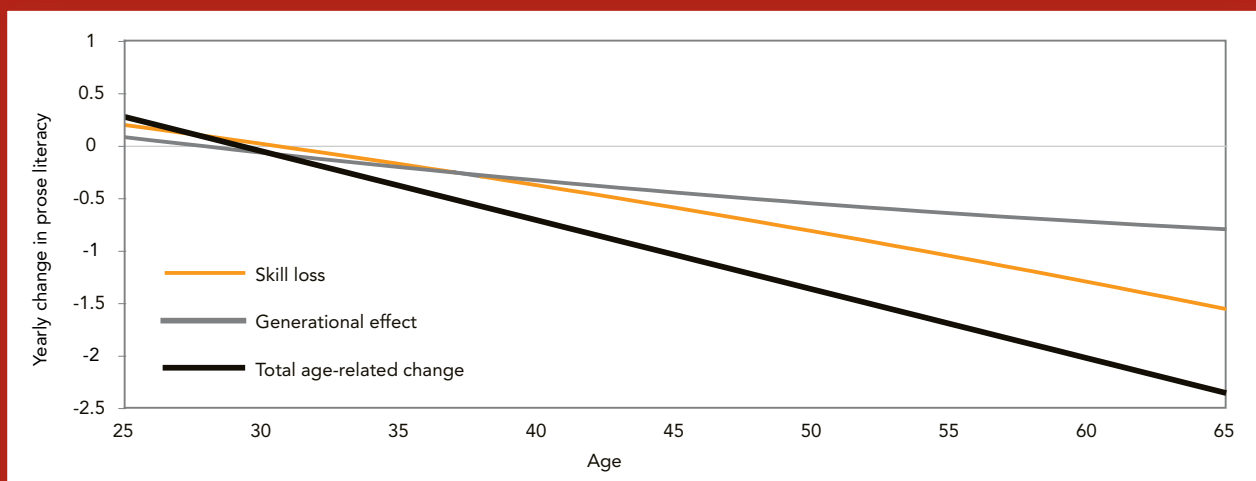
Literacy skill, as measured by IALS/ALL, decreases with increasing age among Canadian adults. As a group, younger Canadians have better literacy skills than their older counterparts. Canadians aged 26 to 45 scored 20 points higher than those aged 46 to 65 on the 2003 ALL. As well, 53% of those in the older age group scored below the level considered adequate, while 38% in the younger group scored below this level.

This age-related decrease in skill has two causes:

1. **Generation Effects**—Older generations had lower initial levels of skill when they entered the labour force. As Canadians become more highly educated, succeeding generations enter the labour force with higher and higher initial levels of skill.
2. **Skill Loss**—Some Canadians experience skill loss over the years following their entry into the workforce. As a result, some older Canadians have lower levels of skill than was previously the case.

Skill loss accounts for approximately 60% of the differences in Prose Literacy between 35- and 65-year-old Canadians. The remaining age-related differences can be attributed to generational effects (see Figure A).

**Fig. A: Age-related changes in literacy skill can be attributed to skill loss and generational effects**

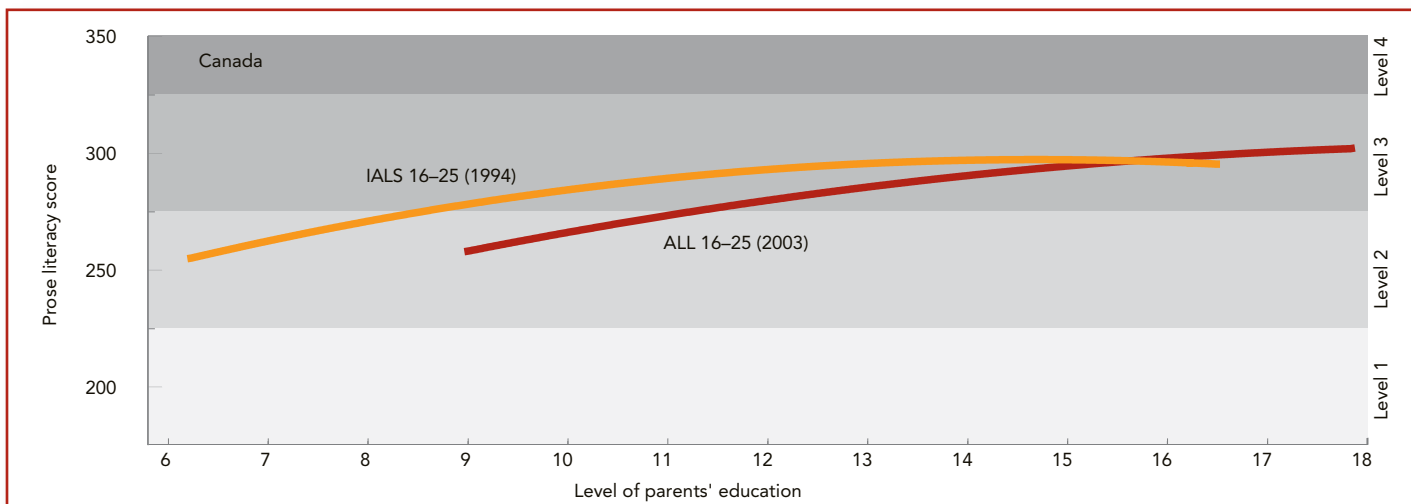


Source: Cartwright, F. *The relative effects of cohort and skill loss on age-related differences in literacy*, Unpublished manuscript (Ottawa: Canadian Council on Learning, 2006).

# LEARNING AND LITERACY: CANADA'S CHALLENGES

Fig. 6.14 **Change in the level and social distribution of skill**

Relationship between respondents' prose literacy scores and parents' education in years, ages 16–65, 1994 and 2003, Canada



Source: Statistics Canada and Organisation for Economic Co-operation and Development. *Learning a Living: First Results of the Adult Literacy and Life Skills Survey* (Ottawa and Paris: 2005)

Figure 6.14 is perhaps even more troubling because it reveals that the 1994 to 2003 skill loss is concentrated in adults from low socio-economic backgrounds, a fact that will tend to reinforce intergenerational inequality in economic and other outcomes.

### 6.3.3 WHY ISN'T MORE INVESTED IN ADULT LITERACY?

Recent studies suggest that Canada does not invest sufficiently in the development of literacy skills in the general population.<sup>27</sup> The recent OECD Thematic Review of Adult Learning<sup>28</sup> made these observations regarding literacy in Canada:

*.... in all provinces we visited, there seems to be inadequate provision for Adult Basic Education (ABE)—that is, for the lowest levels of literacy instruction, at the functional equivalent of elementary and middle school reading and writing. In all provinces, we heard of long waiting lists for ABE programs; for example, the lowest-level literacy programs in Saskatchewan (at grade equivalent levels 1–4) had waiting lists of six to nine months, and officials estimated that they could easily double enrolment in literacy programs.*

*The federal government has reduced its support for basic literacy efforts, and now confines its activities largely to supporting pilot projects, convening interested groups, and fostering coordination. Therefore, funding for ABE is largely provincial. However, as we have already pointed out, provinces vary in their ability to fund*

*education of all types, and some of the lowest-income provinces—the Maritimes in particular—also appear to have the highest concentrations of adults with low literacy.*

If literacy is so important to the things we value as Canadians, the obvious question is: why isn't more invested in adult literacy? Four related explanations comprise the answer and they underscore why the advancement of adult literacy is the responsibility of all sectors of society.

First, until the advent of adult literacy assessment in the mid-1980s, economists did not have a means to determine the impact of literacy skills on long-term economic growth and social inequality. As a result, economists tended to advise governments to invest in what Galbraith called *the familiar furniture* of economic development: bridges, railroads, power plants and mills, and the like.

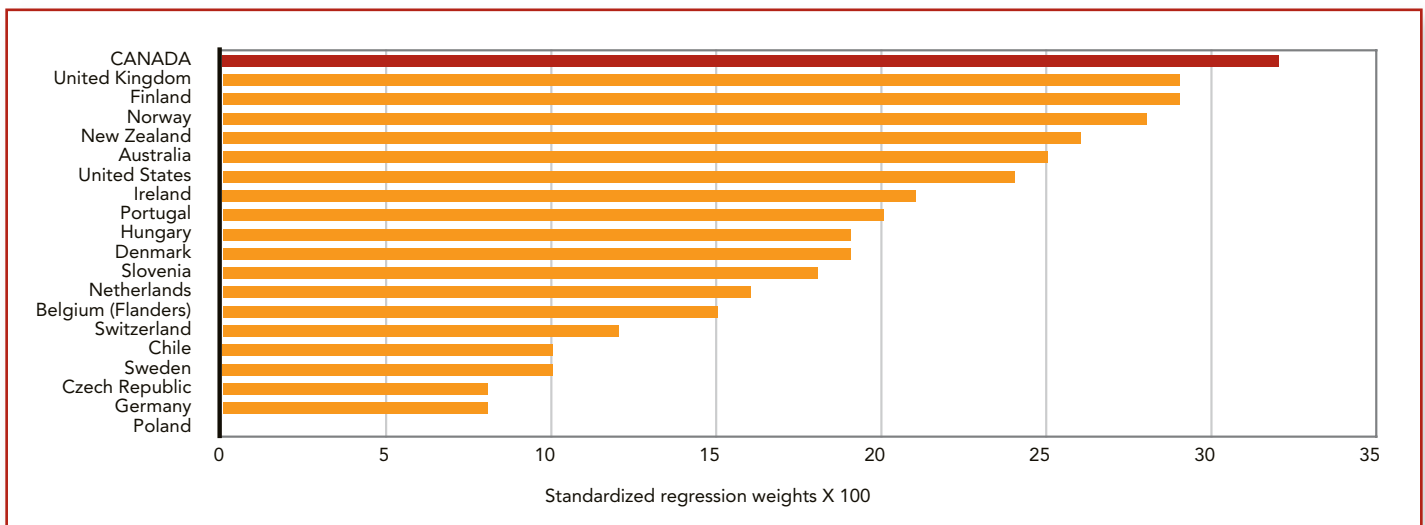
Second, Canadian economic policy-makers have assumed that literacy was just a means for employers to allocate relative success to different groups of individuals (through higher wages) from a fixed economic pie. The higher the workers' skills, the greater their financial reward. Until recently we have not known that literacy actually makes the economic pie bigger. The evidence suggests that differences in average literacy levels between countries actually explain the majority (over 55%) of differences in long-term growth rates of GDP and labour productivity among our most serious economic competitors.<sup>29</sup>

27 Coulombe, Serge, and Jean-François Tremblay. "Public Investment in Skills: Are Canadian Governments Doing Enough?" *The Education Papers* (Toronto: C.D. Howe Institute, October 2005). Commentary No. 217.

28 OECD. *OECD Thematic Review of Adult Learning: Canada Country Note* (Paris: 2003). pp. 17–18. Available at <http://www.oecd.org>. Accessed Oct. 22, 2006.

29 See Coulombe, S., J.F. Tremblay, and S. Marchand. *Literacy Scores, Human Capital and Growth across Fourteen OECD Countries* (Ottawa: Statistics Canada and HRSDC, 2004). Also, Coulombe, S. and J.F. Tremblay. *Human Capital and Canadian Provincial Standards of Living* (Ottawa: Statistics Canada, 2006).

Fig. 6.15 **Earnings and literacy**  
The standardized impact of literacy on wages, ages 25–55, 1994–1998



Source: Statistics Canada and OECD. *Literacy in the Information Age: final report of the international Adult Literacy Survey* (Ottawa and Paris: 2000)

Fig. 6.15 shows the impact that literacy skills have on individuals' wages. Canada's results show, more dramatically than in any other country surveyed to date, the connection between literacy skills and workers' earnings. Although a skills-to-wage ratio this high can be taken as a sign of an efficient labour market, the size of the literacy skills effect in Canada raises serious concerns about those in our economy with low literacy skills. Adults with higher literacy skills have more stable employment, while those with low skills work fewer weeks on average and experience more periods of unemployment.<sup>30</sup>

Third, economic theory suggests that those who benefit from investments in skills should be the ones to pay for gaining those skills, leading some to advocate that individuals and firms—rather than governments—should bear the costs for raising literacy skills.

Fourth, governments have tended to assume that the cost of doing nothing was low. The empirical evidence suggests, however, that the cost of inaction is high. The global supply of literacy skill is increasing rapidly, allowing developing countries to compete with countries like Canada on the quality and price of products and services. The emergence of global markets and supply chains means that changes in the terms of trade have an immediate impact on competitiveness.

This puts increased pressure on Canadian business to increase productivity. Productivity growth will depend to a large extent on the rate at which Canadian firms adopt more knowledge-intensive technologies of production and work organization, which, in turn, are reliant upon having a skilled and literate workforce. However Canadian firms generally have assumed that the public education system would meet their skill needs—something that is no longer the case owing to low birthrates.

## 6.4 The scope of Canada's literacy challenges

This section looks at literacy from the perspective of four of the five CCL functional areas: Aboriginal learning, early childhood learning, adult learning and workplace learning. In doing so it identifies one major or defining literacy issue for each of these facets of lifelong learning. The fifth CCL functional area—health and learning—is the subject of the following section of this report.

### 6.4.1 ABORIGINAL LITERACY

The future of Aboriginal literacy revolves around the relationship between Aboriginal languages and Canada's two official languages. The Royal Commission on Aboriginal Peoples put the question this way: "Is bilingualism realistically sustainable (in Aboriginal communities), or does it lead inevitably to assimilation by the dominant languages?"<sup>31</sup>

<sup>30</sup> Green, David A., and W. Craig Riddell. *Literacy and the labour market: the generation of literacy and its impact on earnings* (Ottawa: Statistics Canada). Unpublished.

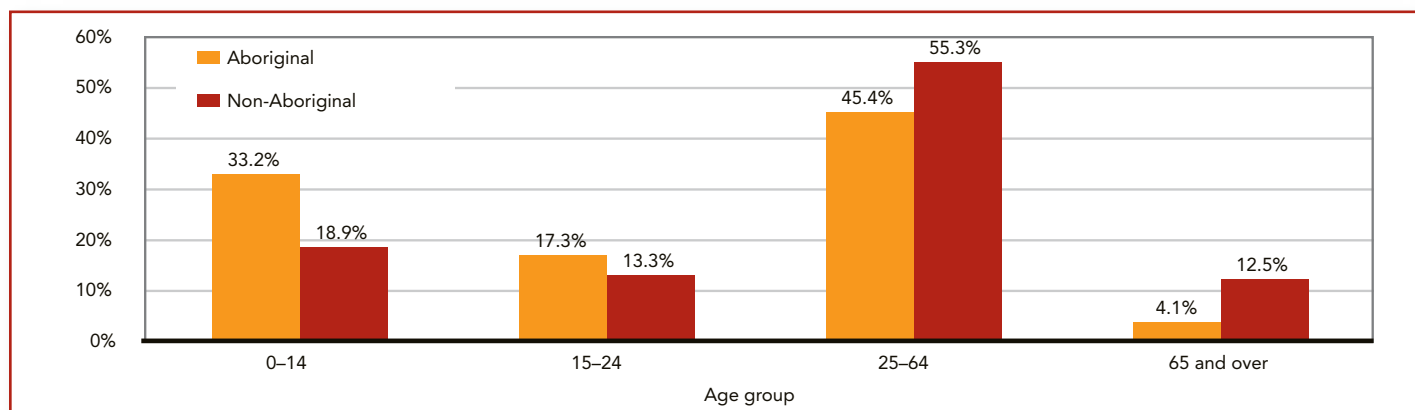
<sup>31</sup> Canada. Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples, Vol. 3, Chapter 6, Section 2.3* (Ottawa: Canada Communications Group, 1996). p. 1. Also Robins, H., and Eugenius M. Uhlenbeck, eds. *Endangered Languages* (Oxford: Berg Publishers, 1991). pp. 157–176.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

A quick review of Canada's Aboriginal languages reveals that there are 641 First Nations or Indian<sup>32</sup> communities made up of 52 nations or cultural groups speaking 11 distinct language families, with between 53 and 70 languages in these families.<sup>33</sup> The Inuit speak several dialects within Inuktitut, and the Métis speak a variety of languages, such as Cree, Ojibwa, Chipewyan and Michif.<sup>34</sup>

In demographic terms, Canada's Aboriginal community is growing rapidly. As Figure 6.16 shows, one-third of the Aboriginal population (33.2%) is aged 14 or younger, while for the general population that figure is 18.9%, or less than one in five. More than half (50.5%) of Aboriginal people are under 25 years of age, while in the general population less than one-third are that young.

Fig. 6.16 **Distribution of Aboriginal and non-Aboriginal population by age group, 2001**



Source: Statistics Canada. *Census 2001*, Catalogue No. 97F0011XCB2001001

The Royal Commission on Aboriginal Peoples went directly to the heart of the matter, arguing that language is the principal instrument by which culture is transmitted from one generation to another. "It is the way by which members of a culture communicate meaning and make sense of their shared experience."<sup>35</sup> The Commission concluded:

*"For Aboriginal people, the threat that their languages could disappear ... is a threat that their distinctive world view, the wisdom of their ancestors and their ways of being human could be lost as well. And, as they point out, if the languages of this continent are lost, there is nowhere else they can be heard again."<sup>36</sup>*

These passages frame the critical literacy issue faced by Aboriginal leaders and public policy-makers: "How to provide access to Aboriginal language literacy (written expression) and oracy (spoken expression) in a way that preserves and enhances Aboriginal languages and cultures while ensuring that Aboriginal Peoples have access to French- or English-language literacy to enable them to participate as fully as they may wish in Canada's society and economy?"

This is a tough question with no easy answer. It is central to the long-standing debate about which should have priority in Aboriginal communities, Aboriginal language literacy or official language literacy. The Standing Committee on Human Resources Development and the Status of Persons with Disabilities<sup>37</sup> and the Assembly of First Nations<sup>38</sup> have both suggested that many Aboriginal people feel strongly that English (or French) should be taught as a second language after children have learned their Aboriginal mother tongue. This is because making the sound-letter matches in one's mother tongue is the key to the efficient acquisition of literacy.

Realizing this goal is becoming increasingly difficult, as the earlier section on Aboriginal culture and language suggests. The use of a language in the home is an important determinant of the survival of that language. The relationship between mother tongue ability and the actual use of a language is an important indicator of language vitality. A decline in Aboriginal language use in the home can only make it more difficult to hand that language on to the next generation.<sup>39</sup>

100 32 Legally speaking, Section 35 (1) of Canada's Constitution Act, 1982, specifies that Aboriginal Peoples are the "Indians, Inuit and Métis peoples of Canada." Available at [http://laws.justice.gc.ca/en/const/annex\\_e.html#l1](http://laws.justice.gc.ca/en/const/annex_e.html#l1). See also, Canada. House of Commons. "Raising Adult Literacy Skills: The Need for a Pan-Canadian Response," *The Report of the Standing Committee on Human Resources Development and the Status of Persons with Disabilities* (Ottawa: House of Commons, June 2003), p. 28.

33 Canada. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3, Chapter 6, Section 2.2. See also House of Commons. "Raising Adult Literacy Skills: The Need for a Pan-Canadian Response," p. 28.

34 Canada. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 1, Chapter 2, p. 1 and Vol. 3, Chapter 6, Section 2.2, p.28.

35 Canada. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3, Chapter 6, Section 2.2.

36 Canada. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3, Chapter 6, Section 2.1.

37 Canada. House of Commons. "Raising Adult Literacy Skills: The Need for a Pan-Canadian Response," p. 31.

38 Assembly of First Nations. "Breaking the Chains: First Nations Literacy and Self-determination," *Report of the Assembly of First Nations Language and Literacy Secretariat* (Ottawa: March 1994), p. 4.

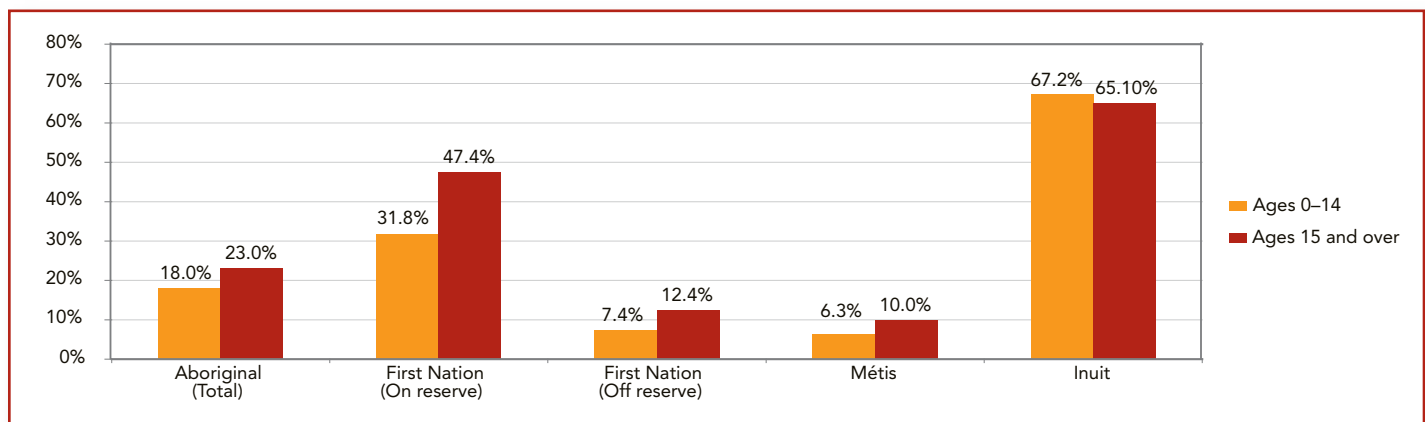
39 Canada. *Report of the Royal Commission on Aboriginal Peoples*, Vol. 3, Chapter 6, Section 2.2.



The statistics tell a dramatic tale. In the 2001 census, 74.7% of Aboriginal people, roughly three out of every four, said that they speak only English in the home while an additional 3.8% said that they speak French exclusively. About 20% report that they speak an Aboriginal language at home, however most also speak English or French. Only 63,145 (6.5%), or just over one in 20, responded that they speak only an Aboriginal language at home.

Figure 6.17 provides a depiction of the percentages of Aboriginal people who speak an Aboriginal language in the home, by age group—those 14 years and younger and those 15 years and older. It is telling that the percentages of Aboriginal language speakers in the home are lower among the younger of the two groups. This suggests that the process of intergenerational language transfer is breaking down among urban Aboriginals—First Nations and Métis—as a result of factors such as increased mobility, urbanization and population dispersion. This is not the case for the Inuit, who are less urbanized and less mobile.

Fig. 6.17 **Proportion of Aboriginals using an Aboriginal language at home, by identity, 2001**



Data Source: Statistics Canada. *Census 2001*, Catalogue No. 97F0011XCB2001040

As more and more Aboriginal people claim an official language as their mother tongue, the long-term prospects for Aboriginal language literacy and the survival of some Aboriginal languages are not promising. There are exceptions. Inuktitut, Cree and Ojibway are still strong with more than 20,000 people speaking each of them.<sup>40</sup> Inuktitut is strongest, with a majority of Inuit adults—about 70%—saying that they could carry on a conversation in Inuktitut. Almost as many adults (65%, see Figure 6.17) said they speak it regularly at home.<sup>41</sup>

Notwithstanding these few exceptions, the language question has profound implications for most of Canada's Aboriginal Peoples. They, like many native cultures around the world, have found that the adoption of a language like English—and the culture and values that come with it—to create jobs and generate investment, comes at a high cultural cost.

The extent of this cost has sparked intense debate about the protection of native cultures and ways of life in the

face of pressures caused by the forces of globalization and free trade, which increasingly demand the use of a standard language across the world.<sup>42</sup> This plays out in Canada in the struggle between the cultural imperative of Aboriginal language literacy and the economic imperative of English or French language literacy.

This issue is made all the more difficult by the fact that Aboriginal literacy research as a field of academic endeavour is in its infancy in Canada.<sup>43</sup> There is little strong evidence of a systematic approach to research<sup>44</sup> on Aboriginal literacy issues, and literacy practice is also underdeveloped and under funded.<sup>45</sup> A two-day consultation on Literacy Research in Canada held in 2004 identified six priorities. Key among them was the importance of initiatives contributing to a strengthened research community among Aboriginal literacy practitioners and researchers.<sup>46</sup>

The lack of research into Aboriginal language literacy skills is a serious obstacle to the development of literacy

40 Statistics Canada. "Aboriginal-identity Population Using an Aboriginal Language at Home Compared with their Knowledge of an Aboriginal Language, for Selected Languages with 2,000 or More Speakers," *Aboriginal Peoples of Canada: A Demographic Profile* (Ottawa: Statistics Canada: 2001). Catalogue No. 96F0030XIE2001007. p. 21.

41 *Aboriginal Peoples of Canada: A Demographic Profile*, 2001, p. 16

42 Lankshear, Colin. *Literacy and the New Work Order* (London: National Institute of Adult Continuing Education, 1998). pp. 1–8.

43 Canada, House of Commons. "Raising Adult Literacy Skills: The Need for a Pan-Canadian Response," p. 31.

44 St. Clair, Ralf. *Building a Community: Reviewing National Literacy Secretariat Research Support 1998-2003* (Ottawa: National Literacy Secretariat, 2004). p. 27.

45 For information on program delivery, see Sabourin, Beverly Anne, and Peter Andre Globensky. *Aboriginal Literacy in Canada: Sustaining the Language of Literacy* (Ottawa: National Literacy Secretariat).

46 For information on this consultation, see: "Participant Recommendations and Observations," NLS March 24–26 Conference, National Literacy Secretariat (Ottawa: September 2004). Also, St. Clair, Ralf. *Research Guidelines for the National Literacy Secretariat 2004–2009*, Draft (Simon Fraser University: Sept. 24, 2004). p.8.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

policies and programming for these languages. While the Canadian component of ALL provided the first direct assessment of the official language literacy skills of Aboriginal peoples, no direct assessments of Aboriginal language literacy in Canada are currently under way or planned.

## 6.4.2 EARLY CHILDHOOD LITERACY

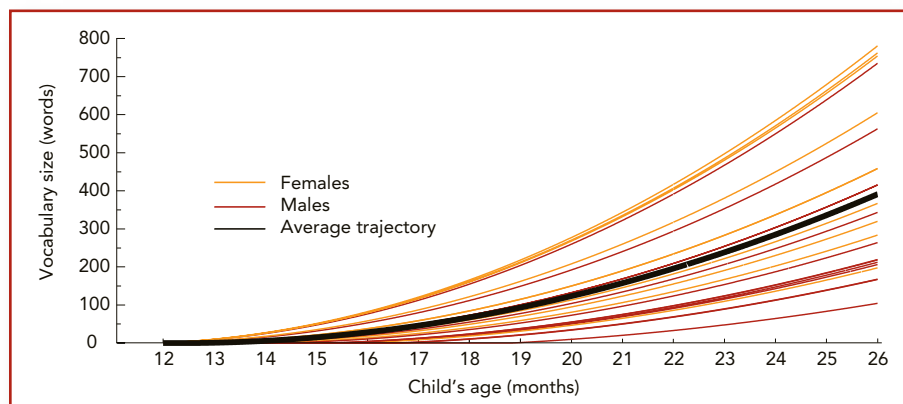
The family is the most powerful and important setting for the development of early childhood literacy. Family literacy encompasses all of the members of a family, regardless of their ages, and the manner in which they develop and use their writing, reading, computation, communication and problem-solving skills to accomplish various tasks in their daily lives.<sup>47</sup> Literacy acquisition and development occur intergenerationally, to the benefit of both children and adults.

The key to early childhood literacy is the extent to which families in their home environments actively encourage the development of language and literacy skills. If a family thinks literacy and learning are important, that family value will influence the attitudes, choices and actions of the children. The evidence suggests that literate family environments make a positive difference to how well children learn in school, which can affect the path they pursue in later life.<sup>48</sup>

Research into the interaction of mothers and their children during preschool years concludes that the quality and quantity of language to which children are exposed has a direct influence on the rate of growth of a child's vocabulary and use of language structures. This research also suggests that increasing the quality of parental literacy can have beneficial long-term effects on the language development of children.<sup>49</sup>

Not all children develop at the same rate, as Figure 6.18, which represents the growth of the vocabularies of children up to 26 months of age clearly demonstrates. It is worth noting the differences in vocabulary development between the sexes at this early stage of life. The chart also illustrates why it is not surprising that when children reach school age there can be significant differences in their verbal skills and literacy proficiency. The evidence suggests that these effects are mostly attributable to socialization, particularly within the family.<sup>50</sup> Parents with higher levels of education and literacy are in a better position to build a strong foundation for literacy and learning in their children.<sup>51</sup>

Fig. 6.18 **The growth of vocabulary**  
Vocabulary size in words, by sex, by age in months



Source: Huttenlocher, J., et al. "Early Vocabulary Growth: Relation to Language Input and Gender," *Developmental Psychology*, Vol. 27 (2) (March 1991), pp. 236–248  
Note: Each line in the chart represents the findings for one child.

The value of family literacy raises important questions about the extent to which one can talk about the literacy of children divorced from considerations of the literacy of the adults caring for them. Given that IALSS results indicate that roughly 9 million adult Canadians have literacy skills below the norm represented by level three, anyone concerned about the literacy of Canadian children and their readiness for schooling ought also to be concerned about the literacy of their parents.

CCL's Lessons in Learning issue entitled "How Parents Foster Early Literacy"<sup>52</sup> explains the importance of literacy in the home and suggests a number of activities that parents and caregivers can use to foster vocabulary and language development, phonological awareness, comprehension, understanding of narrative structure, book awareness and interest, an understanding of print concepts and functions, as well as letter and word recognition.

## 6.4.3 ADULT LITERACY

Higher adult literacy skills benefit the economy and society overall. Even small changes in the literacy skills of a population can have a profound effect on a national economy; and a 1% rise in literacy levels can result in a 1.5% increase in GDP per capita, and a 2.5% improvement in labour productivity. Importantly, increased labour productivity was the most important driver of economic growth among most industrialized countries over the past

47 United States. Department of Education and Office of Educational Research and Improvement (OERI). "Summary of the Research Design Symposium on Family Literacy," *Family Literacy: Directions in Research and Implications for Practice* (Washington: January 1996). Available at [www.ed.gov/pubs/FamLit/intro.html](http://www.ed.gov/pubs/FamLit/intro.html). Accessed Nov. 30, 2006.

48 For a general discussion of the relationship between parental skills and those of their children see Haveman, R. and B. Wolfe. *Succeeding Generations and the Effects of Investment in Children* (New York: Russell Sage Foundation, 1994).

49 *Ibid.*, p. 62.

50 Scarr, S., R.A. Weisberg. "The Influence of Family Background on Intellectual Attainment," *American Sociological Review*, Vol. 43, pp. 674–692. Also, Husén, T., and A.C. Tuijman, "The Contribution of Formal Schooling to the Increase in Intellectual Capital," *Educational Researcher*, Vol. 20 (7), pp. 17–25.

51 Statistics Canada and OECD. *Literacy Skills for the Knowledge Society* (Ottawa and Paris: Statistics Canada and OECD, 1997), p. 29.

52 Canadian Council on Learning. "How Parents Can Foster Early Literacy," *Lessons in Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

decade.<sup>53</sup> Higher literacy skills are also associated with higher levels of health, more efficient education systems, higher levels of social and democratic participation and lower crime rates. Given these socio-economic benefits it seems obvious that we need to ensure sufficient attention is paid to the literacy needs of adults.

There are groups of adults who are at particular risk because of their low literacy skills. These are:

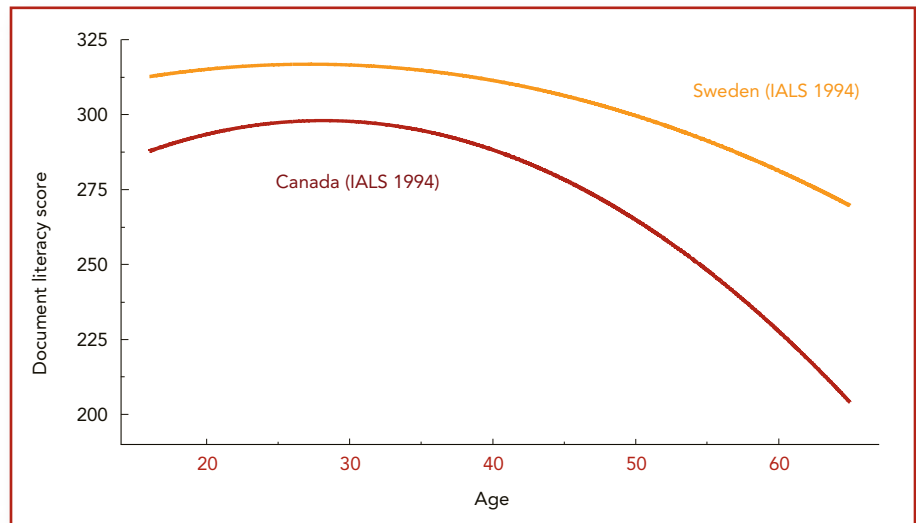
- adults who have not completed secondary school and who are not currently in school
- adults who have completed secondary school, but who have not pursued further education or training
- adults with further education or training who are employed in the most rapidly declining sectors of the economy<sup>54</sup>

There has been a long-running debate in Canada regarding where and how to invest in literacy and learning to achieve a maximum return. There are those who believe that investing in the schooling of children and youth is required to secure a literate nation. Educating young people through to early adulthood, it is thought, will launch them on their way to full, satisfying and literate lives.

While Canada's students do relatively well in international assessments, significant percentages of 15-year-olds—between 20% and 40%, depending on the province—fail to achieve the level of skill believed sufficient to support a full and rich life. Obviously, continued investments to improve the equity of the formal education system are necessary because investing in future generations is *sine qua non* for an advanced society and economy. But are investments in formal education enough?

Both IALS and IALSS confirmed that adult literacy is not permanently fixed by formal schooling. Adult literacy levels are influenced by what people do throughout their lives. People can lose skills acquired in the classroom by failing to use them. Conversely, people can acquire additional literacy skills through practice, experience and training even if they have minimal formal schooling.<sup>55</sup> "Widespread high levels of adult literacy are the result of what adults do, not necessarily what students do."<sup>56</sup>

Fig. 6.19 **Average document literacy scores, by age, Canada and Sweden**



Source: Special tabulation of IALS data by Doug Willms, 2005

A monograph by Constantine Kapsalis based on the 1990s IALS results compares Canada's literacy scores and practices with those of Sweden.<sup>57</sup> Sweden stood first on the IALS scales with the highest scores overall. Not surprisingly, it also had the lowest incidence of low literacy skills. Canada, on the other hand, ranked in the middle of the pack, with low literacy rates that were roughly double those of Sweden. Low literacy was defined as failure to exceed level two on the IALS scales. Figure 6.19 presents a dramatic picture of the differences between the Canadian and the Swedish adult populations. At every age, the Swedes perform higher in direct literacy assessments.

Dr. Kapsalis concluded that the reasons for these differences in scores are related to two key factors, one of which was education. Most Swedish youth start their working lives with at least a base level of literacy skill, regardless of their educational attainment. By contrast Canadian youth, unless they have some form of post-secondary learning, have a high probability of having low literacy skills when they enter the work force.

The second factor, and the one of principal interest here, is that Swedish adults use their literacy skills in daily activities more often than Canadian adults do. For example, in Sweden employed adults aged 26 to 65 are much more likely to participate in lifelong learning activities (62%) than in Canada (43%). Swedes are more likely to use public libraries (69%) than adults in Canada (49%).

53 Coulombe, S., J.F. Tremblay, and S. Marchand. *Literacy scores, human capital and growth across fourteen OECD countries*. (Ottawa: Statistics Canada, 2004). Catalogue No. 89-552-MIE.

54 Canadian Council on Learning. *Adult Literacy: A Synthesis of the Evidence* (Ottawa: British Columbia Ministry of Education, May 6, 2006). p. 4

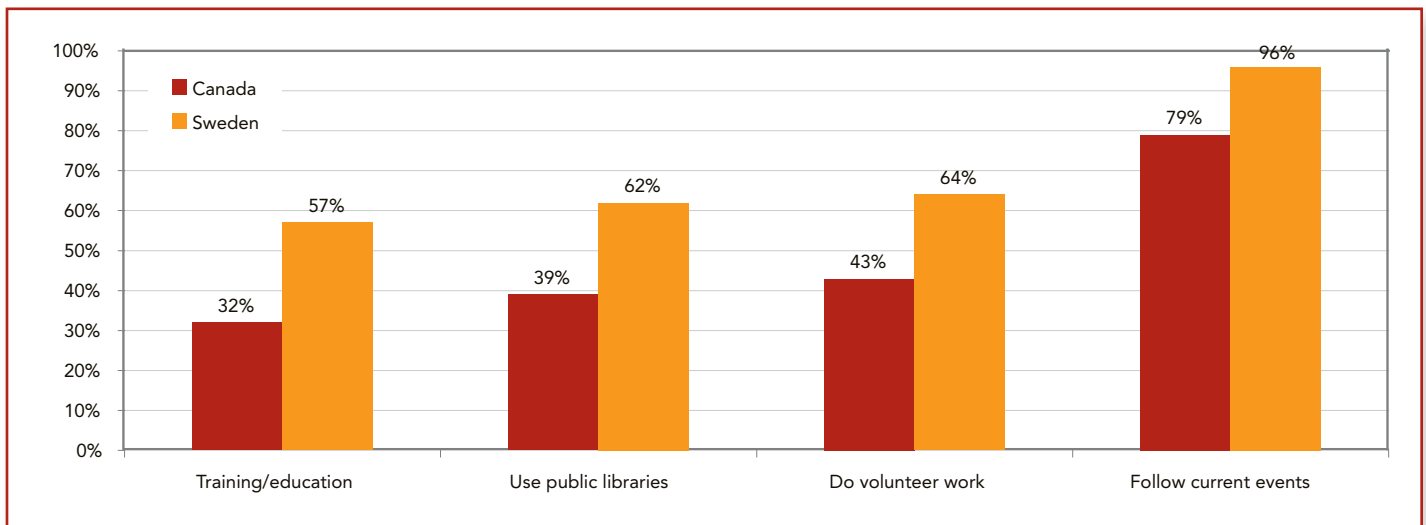
55 Human Resources Development Canada and Statistics Canada. *Reading the Future: A Portrait of Literacy in Canada* (Ottawa: 1996). p. 27.

56 OECD and Statistics Canada. *Literacy, Economy and Society* (Paris and Ottawa: 1994). p. 113.

57 Kapsalis, Constantine. *Catching Up with the Swedes: Probing the Canada-Sweden Literacy Gap* (Ottawa: Human Resources Development Canada, January 2001). This comparative study excluded immigrants to both countries and those over 65 years of age in its analysis.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

Fig. 6.20 Literacy activities of employed adults



Source: Kapsalis, Constantine. *Catching Up with the Swedes: Probing the Canada-Sweden Literacy Gap* (Ottawa: Human Resources Development Canada, January 2001)  
Data source: IALS (1994)

This chart makes the point in graphic terms. The differences between Canadians and Swedes in terms of adult education and training, and the use of public libraries are striking. So are the effects of higher literacy skills such as involvement in volunteerism and the pursuit of current events.

The comparisons with Sweden are instructive. Dr. Kapsalis concludes his analysis with this observation:

*Lifelong learning is an area of relative weakness for Canada ... what needs more recognition from all sectors of society is that there is a continuous need for maintaining and upgrading skills, much as an automobile needs regular maintenance or a computer requires upgrades.<sup>58</sup>*

For additional information on this subject see CCL's Lessons in Learning article entitled "Raising the Score: Promoting Adult Literacy in Canada," which explains some of the key findings and conclusions from the Adult Literacy and Life Skills survey (ALL).<sup>59</sup>

CCL has sponsored several thorough studies of adult literacy in Canada. The first called *The State of the Field Report: Adult Literacy*<sup>60</sup> provides a thematic overview of the Canadian research literature. CCL also prepared *Adult Literacy: A Synthesis of Evidence* for British Columbia's Ministry of Education, which draws a number of lessons from a review of literacy practices during the period from 1985 to 2005.<sup>61</sup>

## 6.4.4 WORK AND LITERACY

This last point about adult learning leads to a discussion of one of the major work-related literacy issues Canada faces. It has traditionally been assumed that if Canadians are equipped with the right kinds of labour-market skills, those skills will be in demand and will be used to their fullest potential with generous rewards. It has likewise been assumed that the Canadian economy produces jobs that can absorb the available supply of high-quality skills.

The IALS monograph, "Literacy Utilization in Canadian Workplaces,"<sup>62</sup> by Harvey Krahn and Graham Lowe, used IALS data to explore the extent to which the literacy skills of working Canadians match the skill requirements of their jobs.

The IALS survey questionnaire asked respondents to report how often they performed specific reading, writing and mathematical tasks on the job. One in five workers rarely or never read letters or memos, about one-third rarely or never wrote memos or letters, and almost two out of five said that they rarely or never calculated prices, costs or budgets. If workers do not perform even these basic tasks, Krahn and Lowe observed, it is unlikely that more skilled literacy tasks will be required of them at work.

Krahn and Low's review of the IALS results revealed that in about 75% of cases there was a reasonable fit between Canadian workers' literacy skills and the skill requirements of their jobs. However, they said, the fact that the majority of workers have skills that match their job requirements

58 Kapsalis, Constantine. *Catching Up with the Swedes: Probing the Canada-Sweden Literacy Gap* (Ottawa: Human Resources Development Canada, January 2001). p. 34.

59 Canadian Council on Learning. "Raising the Score: Promoting Adult Literacy," *Lessons in Learning* (Ottawa: September 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

60 Quigley, B. Allan, Sue Folinsbee, and Wendy L. Kraglund-Gauthier. *State of the Field Report: Adult Literacy* (Ottawa: Canadian Council on Learning, May 2006).

61 Canadian Council on Learning. *Adult Literacy: A Synthesis of the Evidence* (Ottawa: British Columbia Ministry of Education, May 6, 2006).

62 Krahn, Harvey, and Graham S. Lowe. *Literacy Utilization in Canadian Workplaces* (Ottawa: Statistics Canada and Human Resources Development Canada, 1998).

should not provide any solace. The reality is that there are lots of Canadian workers with low literacy skills in low-skilled jobs and medium-skilled workers in medium-skilled jobs.<sup>63</sup>

Since low-skilled workers in low-skilled jobs do not make for a competitive economy, the importance of high-skilled jobs cannot be overstated. This is especially so because public discussions of skills gaps in the Canadian labour force usually imply that the problem is one of a shortage of skilled workers, not of skilled jobs.<sup>64</sup> However, Krahn and Lowe found that more than one in five Canadian workers are in jobs that do not appear to make full use of their literacy skills—in their terms this constitutes a literacy-skills surplus.

Their analysis of IALS results also uncovered literacy-skills deficits. They found that about 700,000 Canadians with low prose literacy were in jobs that demand higher literacy levels than they possessed. There were literacy deficits on the other two literacy scales as well. These deficits, they explain, have a negative impact on the growth potential of the Canadian economy.

These findings raise some perplexing questions. The first is how to raise the literacy skills of the general population to increase participation in and attachment to the labour force. The second is how best to deal with the skills surplus problem (high-skilled people in lower skill jobs). Every bit as important is the third dimension of the puzzle, the skill-deficit question (lower skilled people in higher skill jobs). Finally, there is a need to attract more highly skilled jobs to Canada.

Perhaps the most difficult, Krahn and Lowe note, will be to engage employers, employees, unions and professional organizations in finding ways to upgrade the literacy and other skills requirements of the current 2.5 million jobs characterized by a skills surplus. As the authors concluded:

*“... it is clear that discussions of public policy with respect to literacy must address this issue. To not do so is to ignore a problem with serious human-resource and productivity costs.”<sup>65</sup>*

For an overview of additional workplace learning issues as well as some suggested workplace strategies, see the CCL *Lessons in Learning* article entitled “Understanding the Need for Targetted Workplace Learning Strategies.”<sup>66</sup>

## 6.5 The importance of Literacy for life

*Literacy for life* is no mere slogan. As this report amply demonstrates, the presence or absence of literacy skills can have a profound impact on the quality of people’s lives. The same thing can be said about personal health. The state of our physical, mental, social and emotional well-being all have a direct bearing on our capacity to fulfil our aims and aspirations. Our health determines how readily we can seize the opportunities life presents to us.

This *literacy for life* discussion explains how the two issues of health and literacy have become inextricably connected in the concept of *health literacy*. This form of literacy reveals that reading and computational skills are essential to successfully navigating the health choices we all must make on a daily basis.

There are many ways to illustrate what health literacy means in real terms. For example, nutrition labelling on most pre-packaged food items became mandatory in Canada in December 2005, a step that was applauded by health-conscious Canadians. A recent study reported on in *The Globe and Mail*<sup>67</sup> found that the ability to understand and interpret nutrition labels was correlated with high levels of reading and math skills. Anyone who

reads these labels knows how difficult it is to use this information accurately and effectively.

While legislated nutrition labels are intended to help consumers maintain a healthy diet, they are useful only if the purchaser understands what the numbers mean and how to put the information into healthy practice. This is often made even more difficult by the way products are packaged. Misinterpreting nutritional information can easily cause even the best intentioned among us to over-indulge in potentially harmful ways or to deny ourselves sufficient quantities of essential nutrients.

In her *Globe and Mail* article, dietician and author Leslie Beck explained how tricky it is to use these labels and why they require us to read and calculate with skill. Something as simple as serving size can trip people up, she says, using the example of a 591 ml bottle of Tropicana Fruit Twister. Its label states that a 250 ml serving, less than half of the bottle, has 110 calories and 30 grams of sugar. But most people, she adds, don’t measure out 250 ml and leave the rest for later. Instead they drink the entire contents: 260 calories and 70 grams of sugar, which equals almost 18 teaspoons. Obviously, literacy and numeracy skills are required to use nutritional information properly to avoid unintended health consequences.

63 Ibid., p. 32.

64 Ibid., p. 32.

65 Krahn, Harvey, and Graham S. Lowe. *Literacy Utilization in Canadian Workplaces* (Ottawa: Statistics Canada and Human Resources Development Canada, 1998). p. 28.

66 Canadian Council on Learning. “Understanding the need for targetted workplace learning strategies,” *Lessons in Learning* (Ottawa: February 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).

67 Beck, Leslie. “Grocery Gauntlet: Separating fat, fact and fiction,” *The Globe and Mail* (Toronto: Oct. 4, 2006). p. A13.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

## 6.5.1 LITERACY AND HEALTH

According to the World Health Organization's 1948 Constitution:

*"Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."*

Education has long been recognized as one of the determinants of health. In other words, individuals with more education are more likely to be in better health. Given the relationship between education and literacy it is not surprising that persons with low levels of literacy are in poorer health than those with higher literacy skills.<sup>68</sup> The Canadian Public Health Association (CPHA) acknowledges literacy itself as an important determinant of health, noting that literacy affects other health determinants such as level of income and access to jobs, education and social supports.<sup>69</sup> Not surprisingly, literacy and health will be the focus of the United Nations Literacy Decade for the next two years.

Literacy can affect health in both direct and indirect ways. Low levels of literacy skill—and a consequent inability to understand operating instructions and warnings—can lead to such direct results as the incorrect use of medications, lack of compliance with medical instructions, and risks to safety at home and in the workplace.<sup>68,70</sup> A Manitoba review of literacy and health found that "difficulty comprehending precautions on farm and recreational machinery, such as all-terrain vehicles, water sleds, snowmobiles and farm equipment of all sorts, make rural life more dangerous with consequent health implications."<sup>71</sup> The indirect results of low literacy on health are more long term and can result in problems later in life. Unhealthy lifestyles such as smoking, poor nutrition and not enough physical activity are associated with low levels of literacy. Individuals with low literacy skills are more prone to stress and often have fewer coping skills. They typically lack information about health issues, are less aware of and less likely to use preventive health services, are more likely to be hospitalized and have more trouble using the health-care system effectively.<sup>68,70</sup>

## 6.5.2 WHAT IS HEALTH LITERACY?

While the term health literacy has been in use for over 30 years there is no consensus about its meaning. According to the World Health Organization,

*Health literacy represents the cognitive and social skills that determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health. Health literacy means more than being able to read pamphlets and successfully make appointments. By improving people's access to health information and their capacity to use it effectively, health literacy is critical to empowerment.<sup>72</sup>*

More recently the B.C. Health Literacy Research Team defined health literacy as:

*Health literacy is the degree to which people are able to access, understand, appraise and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course.<sup>73</sup>*

Whatever the definition, common threads run through the health literacy discussion. First, health literacy builds on other literacy skills. Second, health literacy is important not only for interactions with the health-care system, but for making informed choices as we live our lives. Third, health literacy goes beyond the health concerns of one individual to include the ability to advocate for a healthy community.

A health-literate individual knows how to answer the question: "How do I keep myself and my community well?" That may seem simple enough, but, as the nutritional labelling example demonstrates, the devil may be in the detail. Keeping yourself healthy involves activities such as developing a healthy lifestyle in terms of diet and exercise, identifying signs and symptoms of potential illness to be raised with health-care providers, following recommendations for screening and diagnostic tests, understanding how much, how often and under what conditions medication is to be taken and knowing how to navigate the health-care system to get what one needs. Literacy skills are essential to being able to carry out all these activities successfully.

According to CCL's Survey of Canadian Attitudes toward Learning, most Canadians are able to find relevant health-related information and use a number of sources including their family doctor, the internet and books.<sup>74</sup> However, more than half said that they receive conflicting information, which suggests that people need to be able to thoroughly evaluate health information from different sources to resolve

68 Public Health Agency of Canada. "How does Literacy Affect the Health of Canadians?" (Ottawa: Public Works and Government Services Canada, 1998). Available at [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca). Accessed Oct. 16, 2006.

69 Canadian Public Health Association. *Summary Report: Working together to improve the literacy and health of Canadians* (Ottawa: 2004). p. 13.

70 Rootman, Irving, and Barbara Ronson. "Literacy and Health Research in Canada: Where Have We Been and Where Should We Go?" *Canadian Journal of Public Health*, Vol. 96, Supplement 2 (March–April 2005). pp. S62–S77.

71 Sarginson, R.J. *Literacy and Health: A Manitoba Perspective* (Winnipeg, MB: Literacy Partners of Manitoba, 1997).

72 World Health Organization. *Health Promotion Glossary, WHO/HPR/HEP/98.1* (Geneva: 1998).

73 Kwan, Brenda, Jim Frankish, and Irv Rootman. *The Development and Validation of Measures of "Health Literacy" in Different Populations* (Vancouver: Institute of Health Promotion Research, University of British Columbia). To be published on [www.ihpr.ubc.ca](http://www.ihpr.ubc.ca).

74 Canadian Council on Learning. *Survey of Canadian Attitudes toward Learning: 2006 Health-related Learning*. (Ottawa: 2006). Available at [www.ccl-cca.ca/scal/](http://www.ccl-cca.ca/scal/). Accessed on Oct. 12, 2006.

such contradictions. Again, literacy skills are an essential requirement for this kind of critical thinking. It is also interesting to note that more than half of the adult Canadian population, including those over 65 years of age, scored below level three on a health-literacy scale using data from the IALSS. This suggests that a large number of Canadians may have difficulty understanding health information.

### 6.5.3 HEALTH-LITERACY SKILLS ARE IMPORTANT AT EVERY AGE

Health-literacy skills are skills for life. For example:

- Parents need health-literacy skills to ensure their children receive immunizations at the appropriate intervals, to prepare baby formula correctly and for administering correct doses of medication when their child is ill.
- Teens need to learn how to find and use health information as they make their own decisions about what to eat, whether or not to smoke, drink or take recreational drugs, how to use contraception and practice safe sex.
- Workers need to be able to understand signs and manuals in order to work safely.
- Patients need to understand the risks and benefits of treatment options to be able to give informed consent.
- Older adults need to be able to navigate the health-care system to get the services they need to live well and independently.

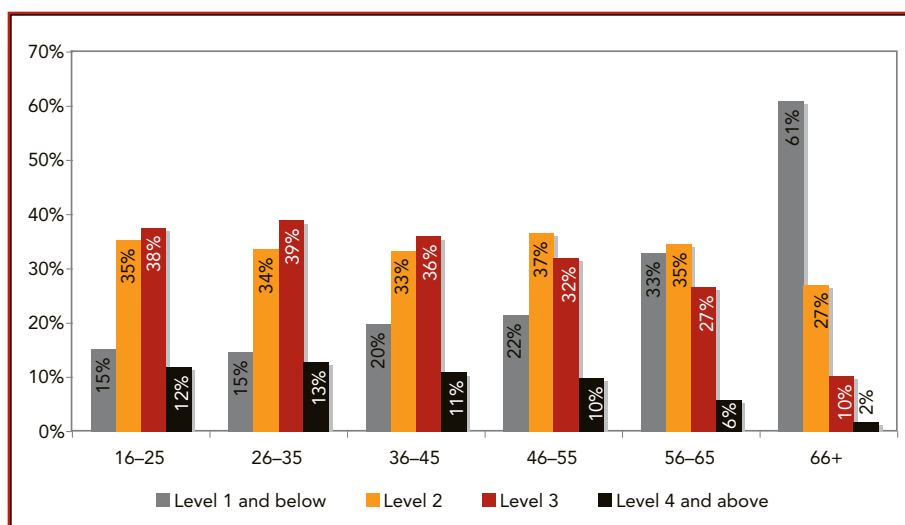
### 6.5.4 SENIORS—A HEALTH-LITERACY CHALLENGE

While we do not yet have tools to measure all of the dimensions of health literacy, as mentioned, a health-literacy scale has been created using the ALL survey. The initial results identify seniors as a special group because of their absolute and growing numbers, their use of the health-care system and their relatively low health-literacy levels.

Seniors are an increasingly large proportion of the Canadian population. In 1971, only 8% of the population was aged 65 and over, compared to 13.1% in 2005 and a projected 23% to 25% by 2031.<sup>75</sup> Most seniors live in the community, not in institutions. About half a million of them provide unpaid care to other seniors, while 400,000 of them provide unpaid child care.<sup>76</sup> Nonetheless, with an aging population comes an increase in the prevalence of chronic diseases and the challenges of managing the care of the elderly, both from the perspective of individuals and society.

Seniors are heavy users of the health-care system and are more likely than younger Canadians to have consulted a doctor in the past year. They also account for one-third of all hospitalizations, a very high number. Nine out of 10 seniors report taking at least one medication, with more than one in four senior women taking five different medications in the previous month.<sup>77</sup>

Fig. 6.21 Health-literacy levels by age groups, Canada, 2003



Source: Adult Literacy and Life Skills Survey (2003)

Figure 6.21 makes the point that the vast majority of older Canadians are not health literate. Only one in eight persons over age 65 (12%) has health-literacy skills at a level considered adequate. While this may in part be due to lower levels of formal education among this group, even those who completed university have, on average, the skills to carry out only the most basic tasks. Further, IALS and ALL showed that literacy skills in Canada decline with age.

Solutions to the deficit in health literacy lie not only in improving the skill levels of individuals, but also in finding better ways to communicate health information to them. Solutions range from providing information in different formats, such as videos through to simplifying instructions through the use of clear or plain language. The Canadian Public Health Association (CPHA) provides a service to encourage and assist health professionals in the use of plain language with patients.

Given the multi-dimensional nature of health literacy, other approaches such as education and training, as well as community, organizational and policy development need to be encouraged and evaluated.<sup>70</sup> Research

75 Statistics Canada. "Population Projections 2005 to 2031," *The Daily* (Ottawa: Dec. 15, 2005). Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Oct. 18, 2006.

76 Public Health Agency of Canada. Aging and Seniors, website. Available at [www.phac-aspc.gc.ca/seniors-aines/](http://www.phac-aspc.gc.ca/seniors-aines/). Accessed Oct. 17, 2006

77 Rotermann, Michelle. "Seniors' health care use," *Supplement to Health Reports*, Vol. 16 (Ottawa: Statistics Canada, 2006). Catalogue No. 82-003. pp. 33-44.

# LEARNING AND LITERACY: CANADA'S CHALLENGES

and knowledge sharing about health literacy is a major focus of CCL's Health and Learning Knowledge Centre.

Improvements both in the literacy skills of individuals and in how health-care providers communicate information, benefit everyone by helping us spend scarce health-care dollars more efficiently and by helping all Canadians lead healthier and more productive lives.

## 6.5.5 LITERACY FOR HEALTHY LIVING AND FOR LIFE

Health literacy provides an excellent example of how literacy influences human activity. It illustrates the important role these skills play day-to-day. Life is an accumulation of small decisions that, taken together, define a person's life course. All of those decisions need to be well grounded. In fact they need to be literate decisions if our lives are to be healthy, rewarding and full.

It is easy for policy-makers and governments to overlook the non-monetary benefits people can receive from high literacy skills. Human capital theory links education to economic outcomes, and the literature is increasingly rich in explanations of the economic results of enhanced literacy. However, to date there is no widely accepted theory linking education, including literacy, to social outcomes.<sup>78</sup> This is at a time when policy-makers are turning their attention to increasingly important issues such as mental and physical health, active citizenship and social cohesion. This is leading to an increased demand for advanced research into the social benefits of literacy to ensure a sound base to make high-quality public policy.

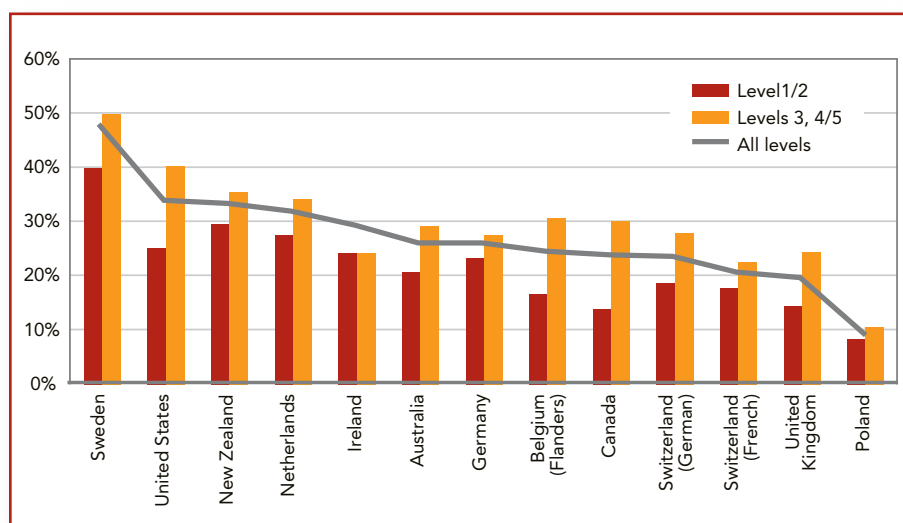
In 2005, the OECD's Centre for Educational Research and Innovation (CERI) launched a project called Measuring the Social Outcomes of Learning (SOL).<sup>79</sup> The SOL project is

designed to inform economic and social policy that relates to education and lifelong learning. It involves in-depth investigations into the nature of the link between learning and well-being, and how such linkages, if warranted, could be used as policy levers to improve well-being through education and to achieve greater equity in the distribution of well-being. Thirteen countries, including Canada, are taking an active part in the SOL project.

The following chart shows that participation in voluntary community activities is highly influenced by literacy levels. This is one illustration of the social effects of increased literacy.

Fig. 6.22 **Literacy proficiency and community participation.**

Proportion of the population that participated in voluntary community activities at least once a month during the year preceding the interview, ages 16–65, by prose literacy level, 1994–1995



Source: OECD and Human Resources Development Canada. *Literacy Skills for the Knowledge Society: Further results from the International Adult Literacy Survey (1997)*

UNESCO is interested in this field as well. As part of the work commissioned to prepare the 2006 Education for All (EFA) Global Monitoring Report (GMR) entitled *Literacy for Life*, UNESCO commissioned a series of background studies including one that seeks to explore, in a development setting, the profound influence of literacy on a range of broad social outcomes.<sup>80</sup> Authors John and Stuart Cameron set out a framework that examines literacy as a set of different assets. They argue that because it is difficult to put a monetary value on many of the wider benefits that accrue to literacy, policy-makers tend to underestimate the true value of an investment in the development of these skills.

The *livelihoods framework*, they explain, is a commonly used bridge between economics and wider development studies. It includes many non-monetary factors often ignored in more conventional cost-benefit analyses. They note that this framework has also recently risen in prominence among development agencies as a way to connect literacy to the wider context of the lives and aspirations of the impoverished. In the livelihoods framework all households

<sup>78</sup> Desjardins, Richard, and Tom Schuller. "Introduction: Understanding the social outcomes of learning," *Measuring the Effects of Education on Health and Civic Engagement Proceedings of the Copenhagen Symposium* (Paris: OECD, 2005), p. 11.

<sup>79</sup> Organisation for Economic Co-operation and Development and Centre for Educational Research and Innovation (CERI). *Measuring the Effects of Education on Health and Civic Engagement: Proceedings of the Copenhagen Symposium* (Paris: 2006). Available at [www.oecd.org/dataoecd/23/61/37437718.pdf](http://www.oecd.org/dataoecd/23/61/37437718.pdf). Accessed on Oct. 25, 2006.

<sup>80</sup> Cameron, J., and S. Cameron. "The Economic Benefits of Increased Literacy," *Education for All Global Monitoring Report 2006* (Paris: UNESCO, 2005). Available at <http://unesdoc.unesco.org/images/0014/001459/145957e.pdf>.



are seen as adopting changing patterns of natural, produced, human, financial, and social wealth in order to create and sustain their livelihoods.

The Camerons define these forms of wealth in these words:

- The relatively modified physical environment is a reservoir of *natural* wealth important to human well-being in itself and capable of self development.
- Human activity in the natural environment can generate *produced* wealth, such as equipment and cooking utensils, that has a physical life and productive potential beyond immediate human consumption.
- People can also develop their capabilities into skills whose expression over time as *human* wealth is both means and end to long-term development.
- Some wealth is held in *financial* forms as money or near money, such as jewelry, due to properties of liquidity and high fungibility (exchangeability) with other forms of wealth.

- Societies have collective histories of building trust, confidence and mutual security into relationships that constitute a *social* wealth.<sup>81</sup>

The Camerons explain that this framework becomes a behavioural theory when it proposes that most people utilize such assets to reduce their vulnerability and to increase their levels of certainty as ways to sustain themselves and their families. The focus in most monitoring of livelihoods by literacy researchers is on how literacy gains improve a vulnerable person's ability to manage his or her affairs in challenging circumstances.

## 6.6 The literacy imperative

There are economic and political reasons, with social and cultural overtones, that suggest why Canada's literacy challenge requires the attention of all sectors of society.

From an economic perspective, the global supply of literacy skills is rising exponentially, so that countries like Canada will inevitably lose jobs to lower wage, but equally skilled, competitors.<sup>82</sup> To remain competitive Canada must move up the knowledge and skill *food chain*, ensuring that Canada's workers have the advanced skills required to attract and keep high-wage, fulfilling and stable jobs. This economic imperative alone explains why our competitors have chosen to invest significant public resources in raising literacy levels.

This economic imperative presents us with what are essentially tough political and social choices. Where to invest will depend upon whether one is trying to:

- raise the average level of literacy skill,
- reduce the proportion of adults with low skill, or
- reduce the level of social inequality in literacy.

The choice of where to spend will also depend upon what it would cost to increase the literacy skills of different groups. Little is currently known about what it would take to move different groups of learners up to level three on the IALS/ALL scales, a fact that complicates the crafting of effective literacy policy. Notwithstanding these uncertainties, the

existing evidence provides some indication of where investment might pay significant dividends.

First, it is clear that Canada's educators must find a way to reduce the proportion of students who fail to meet what educators themselves have defined as the minimum level of skill required to participate and contribute fully. For example, as mentioned earlier, between 20% and 40% of Canada's 15-year-olds failed to meet the Province of British Columbia's graduation standard when it was applied across all provinces.<sup>83</sup>

Second, it is clear that improving the outgoing quality of the primary and secondary education systems will not be enough. With birth rates at an all time low in Canada, there are simply too few students, no matter how high their literacy skill level, to improve the overall literacy level of the Canadian workforce.<sup>84</sup>

Thus, if literacy skill levels are to be raised, Canada is faced with investing in four groups:

- Canadian-born workers who failed to acquire, or no longer have, level three skills
- immigrant workers whose literacy skill levels are not commensurate with their education levels<sup>85</sup>
- those not working whose literacy skill poses a barrier to finding and keeping a job
- Aboriginal adults

81 Cameron, J. and S. Cameron. "The Economic Benefits of Increased Literacy," p. 5.

82 CIO. 2006 *Global Outsourcing Guide*, Stephanie Overby, ed. Available at [www.cio.com](http://www.cio.com). Accessed on Oct. 20, 2006. Also, Yan, Beiling. "Demand for Skills in Canada: The Role of Foreign Outsourcing and Information-Communication Technology," *Economic Analysis (EA) Research Paper Series* (Ottawa: Statistics Canada, 2005). Catalogue No. 11F0027MIE, No. 035.

83 Cartwright, Fernando, et al. *Linking provincial student assessments with national and international assessments* (Ottawa: Statistics Canada's Minister of Industry and the British Columbia Ministry of Education, 2003). Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Dec. 3, 2006.

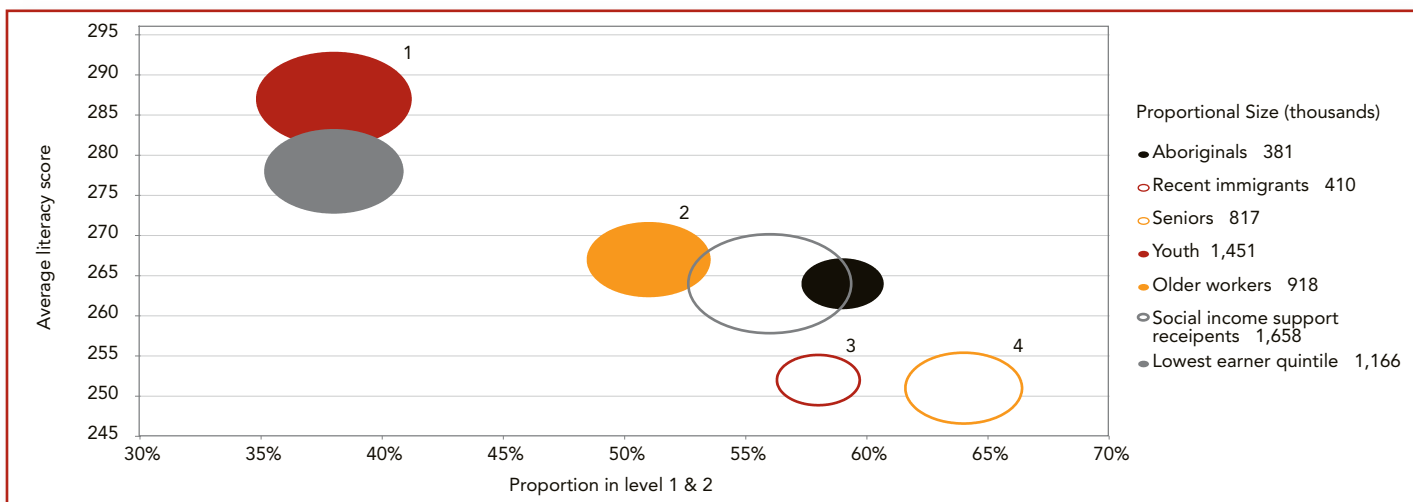
84 Nault, F. "Key Results from the International Adult Literacy and Life Skills Survey 2003," presentation to the Strategic Management Group, Canadian Education Statistics Council (Ottawa: Statistics Canada, 2005).

85 Coulombe, Serge, and Jean-François Tremblay. *Migration, Human Capital, and Skills Redistribution across the Canadian Provinces*, Working Paper D-07 (Ottawa: HRSDC, Industry Canada and SSHRC, 2006).

# LEARNING AND LITERACY: CANADA'S CHALLENGES

Figure 6.23 shows that these groups differ in absolute size (hence the differences in the circumferences of the balloons on the chart), in their average skill levels as plotted on the left axis, and in the proportion of the group that has low literacy skills as plotted along the bottom axis.

Fig. 6.23 **Average literacy scores by demographic groups and the proportion within the prose literacy level 1 and 2, ALL 2003**



1. Ages 16–24
2. Ages 55–65
3. Immigrated to Canada in the previous five years
4. Ages 61–70

Source: Educational Testing Service Interactive Data Tool, available at <http://litdata.ets.org/ialdata/search.asp>

Investing in Aboriginal workers would serve to improve their ability to participate in Canada's labour markets and social system. However, it would do little to fill the overall skill deficit because of the small numbers involved (except perhaps in the west, where they will constitute an important source of net labour-force growth).

Investing in immigrants would help to unleash their full economic potential and ease their integration into Canadian society. Like Aboriginal people in Canada, there are too few immigrants to change the overall literacy skill distribution rapidly, except perhaps in Toronto, Montreal and Vancouver, where they constitute an important source of the net labour-force growth.

Investing in those who are not currently working will provide individuals with improved access to employment and all the benefits that this brings, including a reduction in the cost of providing income supports. However, without an overall investment in the literacy skill levels of Canadian workers, progress toward Canada's productivity and competitiveness goals will be limited.

It is also clear that Canada must invest on the demand side to ensure that the economy can absorb the newly created literacy-skill supply and to reduce the alarming

rate of skill loss that erodes the stock of previously funded literacy skills. Faced with low and variable literacy skill levels, many of Canada's employers have chosen to substitute technology, like robotics, for human skills, a response that, by marginalizing people, amplifies the magnitude of workers' skill losses.

## 6.6.1 LITERACY IS AN INTERNATIONAL IMPERATIVE

As we grapple with questions about how and where to invest in literacy in Canada, it is important to reflect on the fact that literacy has assumed unparalleled importance in a growing number of countries, both among the wealthy and most developed, and among the poorest and least advanced.

During the United Nations Literacy Decade (UNLD),<sup>86</sup> the world's concerns about basic literacy are focussed on the 34 least literate nations of the world. There is, of course, abundant evidence to support that priority. Fifty-eight years after the Universal Declaration of Human Rights proclaimed that every person has a right to an education,<sup>87</sup> one in five adults in the world<sup>88</sup> cannot read or write at all.

However, as in Canada, even the richest and most powerful nations face serious literacy challenges. Until relatively recently there was little public awareness of

86 United Nations General Assembly. *United Nations Literacy Decade: Education for All*, Adopted and proclaimed by General Assembly resolution 56/116 of January 2002 (New York: 2002).

87 United Nations General Assembly. *The Universal Declaration of Human Rights*. Adopted and proclaimed by General Assembly resolution 217 A (III) of Dec. 10, 1948 (New York: 1948).

88 Adults are defined as those over the age of 15 years.

the literacy problems of many adults in the advanced countries. There was scant political or public interest in the consequences of poor literacy skills for national or individual economic outcomes.<sup>89</sup>

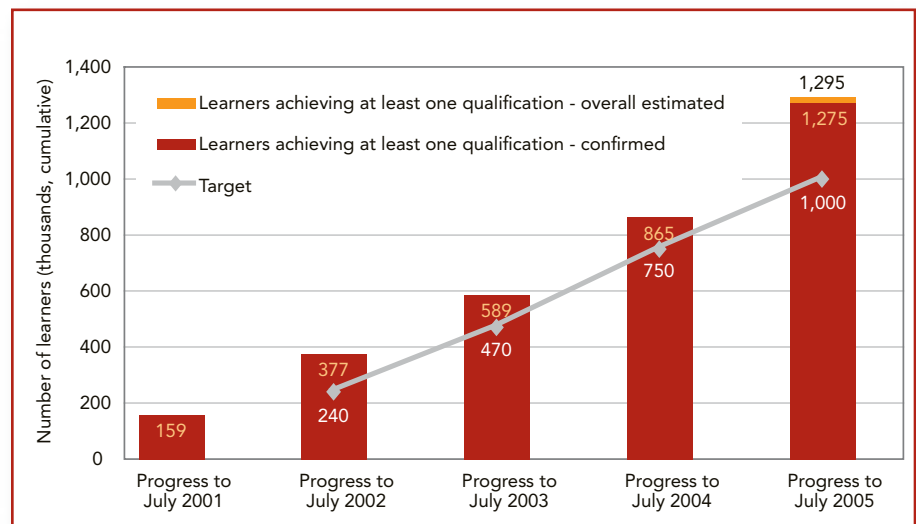
That has changed. Now developed OECD countries are realizing that low functional literacy robs people of opportunity, limits their potential, and curtails the political and economic participation of individuals. Together IALS and ALL, as well as the OECD's Programme for International Student Assessment (PISA) and the International Association for the Evaluation of Educational Achievement's (IEA) Progress in International Reading Literacy Study (PIRLS) have highlighted the challenges occasioned by low literacy and numeracy in developed countries like Canada.

Significant steps are being adopted in many countries to address literacy and other skills requirements. England offers perhaps the most striking example. In 2001, in part because of its low performance in the International Adult Literacy Survey, England launched Skills for Life, a national strategy for improving adult literacy and numeracy skills. The U.K. government's ambitious Skills for Life strategy, according to researcher Barry Brooks, is founded on a desire "to secure social justice and employability for every citizen living, learning and working in England."<sup>90</sup>

Through its determination to meet these goals, the Blair government has set demanding targets, clear timelines and specific milestones. The targets have been designed to increase the number of adults with the skills required for employability and progression to higher levels of training.

The targets are focussed on the number of adults who achieve the kind of qualification that can be counted toward the achievement of the goal. Each learner is counted only once on gaining the first eligible qualification. Entry-level courses considered as stepping stones or prerequisites for Skills for Life offerings are not included in the count. The goal is to improve the basic skill levels of 2.25 million adults between 2001 and 2010, with milestones of 750,000 in 2004 and 1.5 million in 2007.<sup>91</sup> As Figure 6.24 suggests, England appears on course to meet its goals.

Fig 6.24 **Number of learners achieving at least one eligible Skills for Life qualification, 2001–2005**<sup>92</sup>



Source: Brooks, Barry. *Skills for Life and Work: The Journey from Policy through Practice to Progress and Promise for All*, Tribal CTAD (U.K: Lincoln House, 2006)

Noting the tenacious pursuit of these goals, Brooks describes Skills for Life as a "politically driven strategy that is altruistic in its intention, centralist in its implementation and has been described as ruthless in its determination to secure irreversible change."<sup>93</sup>

A vision of collaboration in bringing about change is articulated in "Working Together," the final section of the Skills for Life strategy document:

*The measures that we have set out in the strategy will mark a radical step forward in improving this country's literacy and numeracy skills levels. We in government, our many partners and adult learners themselves must all work together to turn this strategy from a statement of our aims to a record of our achievements, so that our successes at the end of the 21st century will see our work as a major milestone on the road to the creation of a true lifelong learning society.*<sup>94</sup>

Skills for Life has benefitted from enormous public funding. In 2000, the Department for Education and Employment was spending £241 million on literacy and numeracy provision. When the strategy was launched in 2001,

89 Shalla, V., and Schellenberg, G. *The Value of Words: Literacy and Economic Security in Canada* (Ottawa: Statistics Canada and Human Resources Development Canada, 1998). p. 9.

90 Brooks, Barry. *Skills for Life and Work: The journey from policy through practice to progress and promise for all*, Tribal CTAD, (U.K: Lincoln House, 2006). pp. 1–2.

91 OECD. *Draft Country Background Report: Adult Basic Skills and Formative Assessment Practices in England*. (Paris: OECD). p. 10. Available at <http://www.oecd.org/dataoecd/40/42/37406270.pdf>.

92 Brooks, Barry. *Skills for Life and Work*, p. 1. Available at [www.dfes.gov.uk](http://www.dfes.gov.uk).

93 *Ibid.*, p. 2.

94 Brooks, Barry. *Skills for Life and Work*, paragraph 145. Available at [www.dfes.gov.uk](http://www.dfes.gov.uk).

# LEARNING AND LITERACY: CANADA'S CHALLENGES

the government identified £1.5 billion to implement the strategy over the first three years. In 2002 the government committed an additional £1.6 billion to deliver the strategy to 2007.<sup>95</sup> While a figure for the final period to 2010 has not been announced, speculation is that it will be of the same order of magnitude as the two earlier commitments for a total of about £5 billion.

John Healey, the former Minister of Skills and now the Financial Secretary in Her Majesty's Treasury, described the government's commitment to the Skills for Life strategy as "a marathon, not a sprint,"<sup>96</sup> which underscores the understanding that a long-term and sustained effort is required to achieve results.

Ireland faced a similar challenge when the Irish findings of the International Adult Literacy Survey were published in 1997, turning adult literacy into an issue of urgent national concern. The National Adult Literacy Programme (NALP) was established with funding of IR£73.8 million from 2000 to 2006. In announcing the strategy, the Irish government noted that high levels of literacy and numeracy are prerequisites for participation in a modern, knowledge-based economy.<sup>97</sup>

Other nations have moved to increase the literacy capacity of their populations. On Oct. 12, 2006, Australia's Prime Minister, the Hon. John Howard, announced Skills for the Future, a five-year package of skill initiatives worth AU\$837 million.

Part of the newly announced program is a fund of \$408 million focussed on people aged 25 years and over without high-school equivalency. Plans call for the use of 30,000 vouchers per year during the five-year initiative. The vouchers, valued at up to AU\$3,000, will pay for "accredited literacy/numeracy and basic education courses," and will be allocated to:

- unskilled workers wishing to acquire qualifications,
- income support recipients, such as parents and caregivers returning to the workforce, who will face active job-search requirements in the next two years,
- unemployed job seekers in receipt of income support and participating in the Job Network who are undertaking an active job search, and
- people not in the labour force, either voluntarily or because of caregiving responsibilities, who intend to seek work after achieving their qualification.

In making these announcements the Australian prime minister said:

*Many adults fall short of functional levels of literacy and numeracy, which are now essential for just about all jobs, and certainly all jobs that involve the operation of computers and digital technology.*

*Because many Australians left school or arrived in Australia without the levels of English literacy and numeracy necessary to gain qualifications, they miss out on the opportunity to move into more skilled jobs. This leaves them vulnerable to economic change and Australia misses out on their full potential.<sup>98</sup>*

These countries have much in common with Canada. They are all open societies that earn their living trading in the global knowledge economy. As such, they are exposed to shifts in trade and to increases in the supply of economically productive skills like literacy. As well, they acknowledge facing literacy challenges, especially among their adult populations.

Literacy is increasingly becoming an imperative for societies, economies and governments in many nations of the world. In this context we need to explore these and other models to inform Canada's approach to its literacy challenges.

## 6.6.2 ADDRESSING CANADA'S LITERACY CHALLENGES

Canada's literacy challenges will not be met without the active involvement of all sectors of society. While governments can provide leadership and resources, they cannot solve these problems on their own. The commitment and efforts of families and individuals, and of the private and non-governmental sectors are also required.

### 6.6.2.1 What governments can do

All levels of government have responsibility for some piece of Canada's literacy challenge. Since the provinces and territories have a responsibility for education and training, they obviously have a role to play. So do cities, with their control over community resources, such as libraries and schools. Because the federal government has an economic and social development mandate, and literacy has an impact on quality and performance in both of those domains, it clearly has interests as well.

<sup>95</sup> Department for Education and Skills. *Skills for Life: The National Strategy for Improving Adult Literacy and Numeracy Skills—Focus on Delivery to 2007* (Nottingham, England: Government of England, 2003).

<sup>96</sup> Brooks, Barry. *Skills for Life and Work*, p. 18. Available at [www.dfes.gov.uk](http://www.dfes.gov.uk).

<sup>97</sup> Department of Education and Science. *Learning for Life: White Paper on Adult Education* (Dublin: Government Publications, July 2000). p. 22.

<sup>98</sup> The Hon. John Howard, Prime Minister of Australia. *Skills for the Future, Ministerial Statement to Parliament* (Commonwealth of Australia, October 2006). Available at [www.pm.gov.au/news/speeches/speech2175.html](http://www.pm.gov.au/news/speeches/speech2175.html). Accessed Oct. 20, 2006.

The reality is, of course, that responsibility for literacy rests at every level of government in a federal state. But sorting out who should do what, for whom, and with which resources, is a question yet to be clearly answered in Canada. That is why one of the major conclusions of a parliamentary standing committee report was to call on the federal government to work with the provinces and territories to create a “comprehensive pan-Canadian literacy strategy.”<sup>99</sup>

Governments in Canada can have a significant impact on three aspects of literacy. The first and most obvious role for governments is on the supply side of the literacy equation. They can finance, build and run schools that have as a key goal the high-quality provision of literacy skills. In general, supply-side investments focus on increasing the quantity, quality, efficiency or equity of teaching and learning. They can include initiatives in curriculum development or teacher training to increase the effectiveness and efficiency of the educational process.

Second, governments can intervene on the demand side, by instituting policies and programs that serve to increase the economic and social demand for literacy skill.

Demand-side interventions range from social marketing that encourages individuals to use their skills, to accelerated tax write-offs for firms purchasing skill-rich technology.

Demand-side interventions can also include strategies that reduce literacy demand or compensate for low skill levels. For example, plain language programs try to make reading materials accessible to a broader range of readers. The verbal advice provided by publicly financed doctors and nurses can also be thought of as a high-cost way to compensate for the low literacy skills of adults who, if they had higher literacy skills, would have been better able to access health information and advice themselves.

Third, governments can intervene to improve markets for literacy skills. The most familiar market for literacy skill is the labour market, which rewards literacy skill by offering stable, high-paying employment to the high-skilled, while the low-skilled are often only able to find intermittent low-paying jobs. Governments can improve the efficiency of labour markets in a number of ways, including supporting credentialing and test-based selection systems to identify those with literacy issues, and investing in systems that help employers, governments and unions identify and fill their human-resource development needs.

Canada’s education systems can also be thought of as marketplaces that favour and reward literacy skill.

Governments can improve the efficiency and equity of educational systems by testing for literacy when learners are admitted to programs—to ensure that they get the developmental assistance they require—and by evaluating the system to ensure it is reaching its literacy goals.

Canada’s health and social systems can be thought of as a third marketplace, one that offers open access to adults with high literacy skills and reduced access to those with low skills. Governments can improve the efficiency of health markets by, for example, investing in improving the flow of health information between the health-care provider and the patient, and offering tele-health services.

While it can be argued that it is beneficial that Canada’s various markets reward skill, those benefits may be eroded if programs that serve to create temporary employment and to provide income support have the effect of reducing incentives for individuals to seek literacy training. Governments can address this by clearly signalling the employment and wage benefits associated with acquiring higher literacy skills, providing reliable means to diagnose literacy requirements, and ensuring access to high-quality literacy training.

Governments also can employ plain-language principles and various text formats (large print or Braille for example) when communicating with the public. Similarly, investments in libraries might be thought of as simultaneously increasing the demand for reading, improving the supply of literacy skills, and reducing social inequalities by increasing access to reading materials for the disadvantaged.

Governments can show leadership by working in concert to deal with these issues. The link between literacy and economic growth suggests that new investment in raising literacy rates would pay for itself through increased tax revenues and enhanced productivity.

Some government investments can serve multiple goals simultaneously. For example, a supply-side investment in raising adult literacy levels through the provision of training can accomplish a number of things:

- improve labour productivity directly by allowing workers to apply more skill-intense production technologies
- improve labour productivity indirectly by reducing the number of days lost to workplace illness and accident
- reduce the cost of treating workplace injuries

<sup>99</sup> Canada. House of Commons. “Raising Adult Literacy Skills: The Need for A Pan-Canadian Response,” *Report of the Standing Committee on Human Resources Development and the Status of Persons with Disabilities* (Ottawa: Communication Canada Publishing, 2003).

# LEARNING AND LITERACY: CANADA'S CHALLENGES

- reduce the cost of income replacement for workplace illness and accident
- reduce the level of human suffering associated with work-related injury and disease
- reduce the level of demand on health services

## 6.6.2.2 What employers can do

Employers can play several roles to advance literacy skills in the workplace. Employers can influence the demand for literacy skill by selecting technologies of production, as well as work organization and work processes that are literacy-skill rich, requiring workers to use their literacy skills. This would also influence the supply of skill since it would reduce the level of skill loss associated with low levels of use.

Firms can also increase the supply of literacy skill by providing a work environment that is generally conducive to learning, that offers a means for workers to assess their learning needs, including literacy, and that supports literacy education. Firms can also influence the efficiency and equity of markets for literacy skill by adopting selection processes that test for literacy and that offer less-skilled workers access to training programs to improve their skill levels.

## 6.6.2.3 What unions and the labour movement can do

Unions can help to create the conditions that will allow Canadian workers to reach their full potential as literate, informed and active citizens.

Unions can advocate a worker-centred approach to the acquisition of literacy and essential skills. This means promoting the literacy and learning needs of the worker as a whole person responsible for fulfilling various roles at work, at home, in the union and in the community. One effective technique that has been used in the United Kingdom, Germany and Sweden is to have a designated person (in the U.K. the practice is to identify a union representative) to act as a learning advocate for employees, to ensure that their training needs are identified and met.

Unions can also use clear language in all aspects of their communications and programming to help union members participate more fully in the life of the union.

## 6.6.2.4 What other social institutions can do

Other social institutions, including advocates and non-governmental organizations, can take the literacy levels of their clients into account and acknowledge the central role that literacy plays in creating independent and engaged citizens. Remedies for poverty—the result of not being able to find and keep employment and to be paid a reasonable wage—depend critically upon literacy, for example. Social institutions can also assist in identifying the literacy needs of their clients, who often do not recognize or acknowledge their literacy shortcomings, which has important repercussions for policy-making and frontline practice.

## 6.6.2.5 What educators can do

The most obvious thing that educators can do is to ensure that all children graduate from our educational systems with the literacy skills that they will need to participate fully economically and socially. Educators must also find ways to ensure that literacy programs attract and retain adult learners.

It is important, too, that educators accept that people learn in places outside of the classroom, and that as educators they can play an important role by contributing to people's capacity to create literacy- and learning-rich environments in the home, in the community and in the workplace. Creating these environments is essential if we are to achieve the goal of graduating students who are learners for life, able to maintain or even enhance their literacy skills throughout adulthood.

## 6.6.2.6 What individuals can do

Individuals can influence the supply and demand for skills by participating in literacy instruction and by adopting a lifestyle that values and uses reading skills regularly so that, at the very least, they can retain the level of skill they acquired in school.

Individuals can also increase the efficiency of markets for skill by reflecting on their own and their family's learning needs and by acting to meet those needs. They can help to create literacy- and learning-rich environments in the home, workplace and communities.

## 6.6.2.7 What CCL will do

The mission of the Canadian Council on Learning is to improve lifelong learning across the country by:

- informing Canadians about the state of learning in Canada;
- fostering quality research on learning;
- facilitating evidence-based decisions about learning through knowledge exchange to ensure that success stories are shared and repeated; and
- becoming Canada's authoritative resource on learning issues.

Literacy is one of CCL's crosscutting themes and literacy issues are the focus of several current and forthcoming initiatives designed to provide Canadians with a greater understanding of literacy and essential skills issues.

CCL publications will describe the literacy activities of CCL's knowledge centre forums, explore developments in literacy research and practice, and analyze notable domestic and international literacy policy initiatives. The intersection of literacy issues with the other four CCL crosscutting themes—gender, culture, e-learning and

French minority-language settings—will be reflected as well in annual reports on these themes.

In addition CCL will continue to explore what works in literacy and to share what it discovers in its regular electronic publication *Lessons in Learning*. Having already published several issues on literacy, CCL knows that these reports stimulate interest and action based on promising practices.

CCL also intends to expand Canadians' appreciation of the importance of literacy through its research mobilization program, and through strategic partnerships to encourage CCL's partners to embed literacy as a fundamental element of their work on learning. Finally, CCL's knowledge exchange forums will continue to promote dialogue about and action on literacy issues. CCL recognizes the value of engaging all sectors of society in literacy solutions, and works with policy-makers, educators, employers, unions and non-governmental organizations to find ways to advance literacy in Canada.

## 6.7 No time for complacency

### 6.7.1 WHAT CANADA NEEDS TO KNOW

Successful actions depend on sound intelligence. Since the tools to measure literacy skills reliably for entire populations have only recently become available, what we know about literacy problems, and their causes and consequences, is still quite limited. Based on the information and analysis contained in this report it is possible to identify a number of broad literacy-related issues that require further research.

A comparison of the IALS and ALL studies shows that the loss of literacy skills in the Canadian population between 1994 and 2003 was of a magnitude large enough to offset the skill gains from increasing educational quality and participation. This should be reason enough to make literacy a public policy priority. To deal with this problem we need a better understanding of the social and economic forces that underlie this skill loss. We certainly know the effects. Skill loss deprives individuals of the economic and social benefits that would be associated with their original skill level. At the aggregate level, skill loss serves to reduce the return on the public's investment in education and deprives the economy of skills it could use to create high-skills jobs.

We also need a clearer understanding of the link between literacy skill and health, and how increased literacy levels might reduce both the demand for health services and the costs of treatment. Low levels of health literacy limit an individual's access to printed health information while a lack of basic literacy skills concentrates individuals in occupations that have the highest risk of illness and accident. As well, because Canada's labour, education and health markets select and reward literacy so highly, low-skilled individuals are subject to higher levels of chronic stress that can have debilitating effects on their health because elevated blood cortisol levels impair their immune systems.

We need to understand the role that essential skills play in fostering productivity growth. Of particular concern is how the average level and distribution of literacy and numeracy skill influences innovations in work processes, technology and products at the level of the firm, particularly the rate at which firms and individuals acquire and apply information and communications skills and technologies (ICTs).

# LEARNING AND LITERACY: CANADA'S CHALLENGES

If we had better information on the direct economic benefits of higher literacy to business, such as lower absenteeism and accident rates, lower recruitment and retention costs, higher productivity, greater worker flexibility and adaptability, more firms might be willing to invest in raising the literacy skills of their workers.

We need a better understanding of the mechanics of inter-generational transfer of literacy skill, of the role of parents and schools in fostering literacy and of ways to reduce the proportion of children leaving the system without adequate skills. Since the evidence suggests that many children arrive at school without the necessary skills to learn how to read, educational systems need to identify these children in order to help them enhance their literacy skills in ways that are appropriate to their learning styles and needs.

We also need to know what the characteristics of different groups of adult literacy learners imply for the content and cost of remedial instruction, and whether they have the financial resources to pay for such instruction themselves.

We must examine the barriers to learning faced by adults with low literacy to discover why they do not invest the time, effort and money required to improve their skill levels.

Finally, we need to profile the characteristics of the literacy field just as we would with any sector considered important to our economic future. Little is known about the qualifications of Canada's adult literacy instructors, about the characteristics of people currently participating in remedial programs, about how much is being spent by individuals, firms or governments on literacy training, or about the efficiency and effectiveness of the programs themselves.

These are knowledge gaps that can be filled if we truly are committed to dealing with Canada's literacy challenges.

## 6.7.2 NOW IS THE TIME FOR ACTION

The message of this literacy feature is that the presence or absence of literacy skills affects people in crucial ways. It shapes the quality of their lives and influences life chances. A person's literacy affects their education and training opportunities, attachment to the labour force, access to highly skilled and highly paid jobs, and

overall quality of life. It is increasingly evident that the acquisition, maintenance and enhancement of literacy skills are indispensable goals for every Canadian.

Not only individuals are affected. High rates of literacy are an imperative for democratic societies as well. Societies need highly literate citizens, able to absorb and use complex information to participate in intelligent public policy debates and to make effective, informed electoral choices. Those with high rates of literacy show an increase in active citizenship, such as higher rates of volunteerism and giving.

Modern technology-intensive and knowledge-based economies require high literacy skills for survival. In our highly competitive world the productivity and wealth of economies increasingly rises or falls on the quality of the skills that labour forces possess. Workers, especially highly literate ones, affect how productive economies become and how successfully they attract highly skilled jobs and investments in human capital formation. Canada's continued economic success depends on raising average literacy levels and on reducing the proportion of adults with relatively low skill levels.

The importance of literacy for governments is also very clear. Governments need to find economically efficient ways to reduce social inequality in individual health, education, labour-market and social outcomes. Many of these inequalities can be traced back to low literacy skills and to inadequate access to literacy training for out-of-school youth and for adults. To address inequality, governments need to invest in literacy. This will reduce the demand for and the cost of public support services. For example, providing health and educational services to a fully literate population is considerably cheaper than the alternative. Canadian taxpayers realize better service quality for their tax expenditures.

There is no question that literacy is high on the international agenda. The reasons are inescapable. Literacy really matters in every country for social, cultural, political and economic reasons. Countries that ignore the imperative of developing literacy skills to the highest level possible do so at their peril. A society that fails to adopt policies and practices that balance both literacy demand and supply is not only wasting its resources on inefficient solutions, but also jeopardizing the prosperity and quality of life of its next generation of citizens.



# SUMMARY AND FUTURE DIRECTIONS

## 7.1 Chapter Summaries

The State of Learning in Canada is the first comprehensive overview of the Canadian learning landscape, from early childhood and school-based education through to formal and informal learning by adults—in the home, at work and in the community. It also examines learning issues particular to Aboriginal peoples in Canada and provides a special focus on the state of literacy in Canada.

The following is a synthesis of the principal observations from each of the report's four main chapters and of the special feature on literacy.

### EARLY CHILDHOOD LEARNING

Learning in early childhood is crucial, not just to prepare children for school, but to equip them for life.

In the first few years of childhood, the development of basic skills such as language, sensory processing and movement lays the foundation for more complex skills later in life. Children's brains develop in a series of stages that are especially well adapted for specific types of learning. If learning is not acquired at the right stage, it is more difficult for the child to catch up later.

Early childhood learning comprises four major development areas: physical, cognitive, language and communication, and emotional and social. Ideally, indicators would measure the progress of Canadian children in all four areas, from the prenatal period (including factors affecting the health of the baby's mother as well as the baby itself) to the time the child reaches school age.

Despite laudable efforts at the regional and provincial levels to collect information on early learning, there are few comprehensive data to chart progress across all of Canada and all stages of early childhood.

However, we do know that significant proportions of children risk being left behind at an early age. This is true of children in all socio-economic groupings, but children growing up in lower income families face the greatest risk of developmental delays.

Research demonstrates that the quality of child care has a significant impact on early development. More than half of all young children in Canada are cared for outside the home, yet OECD comparisons reveal that Canada trails other industrialized countries in its level of public commitment to early childhood services.

### Making progress

While the importance of the early years to overall success in life has been well documented, more research is needed to gain a greater understanding of how Canadian children are doing in all areas of development. In particular, there is a need to:

- support the expansion of provincial and regional efforts to develop research tools, collect data and report on early childhood learning and development
- continue to learn from existing provincial and regional data, as well as pan-Canadian sources such as the National Longitudinal Survey of Children and Youth
- develop a set of pan-Canadian indicators to monitor the progress of early learning, from the prenatal period through to the school years

# SUMMARY AND FUTURE DIRECTIONS

## LEARNING IN SCHOOL

What children learn in school—and how they ‘learn to learn’—are of paramount importance. These issues influence a child’s potential for success in formal education. But more than that, school-based learning lays the foundation for further learning, prosperity and success throughout life.

And while success in school is of great value to the individual, it also carries benefits for society as a whole. There are rising expectations that schools produce graduates with the skills, knowledge and civic-mindedness needed to solve many of the economic and social challenges facing Canada.

Indicators suggest that Canada is doing relatively well in some areas of school-based learning, but there is room for improvement.

For example, the internationally administered PISA tests show that the science, mathematics, reading and problem-solving skills of Canadian 15-year-olds are above the OECD average, but trail scores in Finland and several other countries. Despite a steady improvement in recent years, Canada’s high-school dropout rate is also higher than that of many other OECD countries.

Moreover, many school-aged children do not learn healthy habits or behaviours. Canadian children are less physically active than ever before and childhood obesity rates have ballooned in recent years. School safety is also in question, as Canadian children are more likely to be bullied than children in most other OECD countries.

Other indicators show that Canadians are likely to graduate from school with an inadequate understanding of Canadian politics and history. This may be contributing to declining voter turnout and civic participation among Canadian adults.

The data also indicate that Canada is among the world leaders in post-secondary attainment and compared to other industrialized nations, we have a larger proportion of students choosing college or vocational programs.

## Making progress

Indicators suggest that Canada is doing relatively well in some areas of school-based learning, but there is room for improvement in the following areas:

- ensure that schools offer safe and healthy learning environments, where students learn and practise healthy behaviours that will serve them well for the rest of their lives
- understand and increase high-school retention rates, particularly for at-risk groups such as boys and students living in rural areas
- ensure that youth graduate with at least a basic understanding of their country’s history, and their own rights and responsibilities in a democracy
- prepare young Canadians with the skills and credentials that will be in demand in Canada’s growing economy
- promote the development of more pan-Canadian information about post-secondary education, particularly in relation to the quality of education and the readiness of youth for higher learning

## ADULT LEARNING

We know that ongoing learning brings economic, social and health benefits throughout a person's life. And yet for many Canadians, participation in learning activities declines markedly after the school years.

Adult literacy has not improved in the past decade and two of every five Canadian adults lack the literacy skills needed to succeed in a knowledge-based economy. Moreover, the literacy skills of many Canadians decline through adulthood, leaving all too many seniors with skills barely above the level needed to fully participate in today's world.

Health literacy—the ability to understand and communicate the information needed to attain and sustain good health—appears to be particularly low in Canada. Indeed, more than half of all adults demonstrate inadequate health-literacy skills. The proportion is even higher among older Canadians. This is a worrisome trend because seniors are more likely than younger Canadians to be in poor health, and to use medications with complicated labels and other health services requiring more advanced literacy skills.

Workplace training has proven benefits for productivity, which is a key driver of Canada's economic competitiveness. But Canada lags behind other countries in employer-sponsored training. In fact, the people most likely to benefit from job-related training, including older workers and individuals with less education, are generally less likely to receive it.

There's growing evidence as well that Canadians are not sufficiently engaged in learning in their communities or their personal lives. This type of informal learning, which can be gained by volunteering, joining groups and organizations, and pursuing hobbies and interests, contributes to community development and cohesion.

On the other hand, more and more seniors are becoming internet users, which suggests that new technologies are broadening access to learning opportunities across the lifespan.

## Making progress

To support lifelong learning, there is a need to:

- identify ways to improve and regularly monitor adult literacy skills
- undertake further research on health literacy and its impact on personal health
- raise awareness among health practitioners and others about the limited health literacy skills of Canadians
- help employers and employees overcome barriers to work-related learning, such as the perceived lack of money and time for training
- promote community engagement as a form of lifelong learning, especially for people who are more likely to be excluded, such as recent immigrants, seniors and the disabled

# SUMMARY AND FUTURE DIRECTIONS

## ABORIGINAL LEARNING

First Nations, Métis and Inuit peoples have a long tradition of lifelong learning, which is viewed as a way to achieve a healthy balance between the spiritual, emotional, physical and intellectual dimensions of life.

Today, many Aboriginal people face economic, social and systemic barriers to full participation in lifelong learning. Despite these challenges, the educational outcomes of Aboriginal people have shown marked improvements in recent years.

Unfortunately, most research in recent decades has focussed on the educational deficits of Aboriginal people, highlighting the gaps between the learning outcomes of Aboriginal people and non-Aboriginal Canadians. The holistic nature of Aboriginal learning across the lifespan is often not recognized in current research and overlooks, for example, the important contributions that informal and traditional knowledge bring to Aboriginal learners.

Learning is most likely to be successful when it involves parents, families, Elders and other community members, and respects Aboriginal traditions and values.

Taken together, the evidence to date suggests the need to broaden our understanding of how “success” is measured for Aboriginal learners.

## Making progress

To gauge progress in strengthening learning outcomes among Aboriginal Peoples, there is a need to:

- identify new indicators of Aboriginal learning that reflect the lifelong learning goals and values of First Nations, Métis and Inuit peoples
- collect more reliable data on all aspects of Aboriginal learning
- develop better approaches to understanding and sharing effective practices in Aboriginal learning
- enhance or create mechanisms to strengthen knowledge of Aboriginal languages and cultures, while also improving literacy in English or French

## LITERACY AND LEARNING: CANADA'S CHALLENGES

Canada is an advanced nation with a well-developed education sector. Yet more than four in 10 adults score below the level of literacy considered necessary to succeed in today's world.

The report's special feature on literacy explains that the term literacy does not simply refer to an individual's ability to read and write. In modern society, an adult must have a firm grasp of multiple literacies (prose, number, document and problem-solving skills), and have the ability to understand and evaluate information in many forms, delivered through various media.

These literacy skills are important for the individual, the community and the country. For the individual, the benefits of literacy include improved health, a higher quality of life, more access to training opportunities and an increased likelihood of holding better-paying, more highly skilled jobs.

The highly literate are more likely to participate in volunteer activities and other forms of community engagement, which enhances social cohesion. They are also more likely to participate in a technology-intensive, knowledge-driven economy, which is necessary for a healthy modern economy.

Canada cannot afford to be complacent about literacy. If we want to maintain our country's international position as an economic and social success story, we must raise the overall literacy skills of our adult population, ensure the next generation acquires the skills and habits needed to succeed and, all the while, foster a desire to learn throughout our lives.

Other countries—England, Ireland, Australia among them—are aggressively pursuing national literacy programs, many with notable success. If Canada ignores the imperative of improving adult literacy, we do so at our peril.

### Making progress

Addressing Canada's literacy challenge is too large an issue for any government or interest group acting alone. Because literacy is woven throughout all aspects of economic, social and cultural life, it is an all-encompassing, complex and shared responsibility. Moving forward, here is what Canadians can do:

- **Governments** can display leadership in making literacy a priority crosscutting issue within their respective jurisdictions and in their collaborations with others. They can intervene on both the supply and demand sides of the literacy issue by supporting educational and training institutions that promote the acquisition of literacy skills and by creating policy and programs that increase the economic and social demand for literacy. They can also adopt compensatory strategies, such as plain language publications, to ensure greater accessibility of public services.
- **Employers** can organize the work environment in a way that demands high literacy (requiring workers to maintain or improve literacy skills). In order to do so, workplaces must be conducive to learning and provide ample training opportunities for employees.
- **Labour unions** can advocate for better literacy supports in the workplace.
- **Social institutions and non-governmental organizations** can keep the literacy landscape top-of-mind as they engage with governments and other institutions.
- **Educators** can ensure that all children graduate from school with strong literacy skills and habits, and search for new ways to engage adults in lifelong learning.
- **Individuals** can participate more actively in literacy skill building by adopting a lifestyle that values reading, by engaging in learning as adults, and by recognizing and acting on their families' learning needs.

## 7.2 Future Directions

Successful learning is holistic, weaving together intellectual, spiritual, physical and social growth and development. This report, in conjunction with CCL's Composite Learning Index, underscores the interdependence of learning and success in the economic and social spheres.

At a time of fierce global competition, rapid technological change, an increasingly diverse population and an aging society, lifelong learning for all Canadians is the key to Canada's future prosperity and success.

Canada is making progress in many aspects of lifelong learning. But more work is needed. Here are some ways in which different groups can help strengthen Canada's culture of lifelong learning:

### Parents and caregivers

- Parents and caregivers need to support early childhood development by taking an active role in early health and learning. The focus must be on optimal prenatal health and effective learning opportunities for all children. The simple act of reading to children, for example, can foster a strong foundation for learning.
- School-aged children need to be active and healthy in order to reach their full learning potential. Regular exercise and healthy breakfasts help children learn. Healthy behaviours learned at an early age can enhance health later in life.

### Educators

- Working with students and parents, educators should focus on means to help youth finish high school.
- Educators need to ensure that schools are safe, healthy and inclusive environments.
- Schools should help children learn about and practise healthy behaviours that will stay with them throughout their lives.

### Employers

- Employers need to support staff training that extends beyond instruction on specific tasks. Training should include opportunities to maintain and update crucial skills, such as literacy and numeracy.
- Work-related learning should be available to all employees, including older and less-educated workers who are often passed over for training.

### Canadians and governments

- It is important for high-quality early childhood care and activities to be available to all preschoolers, whether they are cared for inside or outside the home.
- The many and persistent barriers to greater adult literacy must be addressed.
- More research and knowledge exchange is needed across the spectrum of learning issues. Without sound research and data, Canada may be unable to identify and address future learning challenges in a timely manner.
- The definition of learning success for Aboriginal peoples must be broadened so as to reflect Aboriginal priorities, values and experiences.
- Support for Aboriginal languages is needed in order to preserve many ancestral languages from extinction.
- All Canadians must come to see learning as a continuous, seamless and lifelong process.

*Germany, Finland and Japan are among the countries that have taken the need for lifelong learning to heart. For instance, Finland's 1997 strategy, called "The Joy of Learning," outlines concrete actions to promote learning throughout life. Japan, meanwhile, established a Lifelong Learning Policy Bureau, which is responsible for the overall coordination of policies promoting lifelong learning.*

## 7.3 Measuring Progress

Measuring performance is an essential first step toward improvement. The Canadian Council on Learning, with the guidance and expertise of our five specialized knowledge centres, will continue to measure Canada's progress in developing a culture of lifelong learning.

In particular, we will develop and apply suitable indicators, track changes, compare Canada's performance with that of other countries, and study other exemplary models of learning.

The data we collect will be analyzed and published in three principal forms:

### 1. The *State of Learning in Canada*

Every winter, CCL will release an updated edition of the *State of Learning in Canada*, which will present and analyze the latest indicators of learning, determine where progress has been made and where we continue to fall short, and identify the gaps that remain in our understanding of the issues. Each year this report will also include a special feature on a particular cross-cutting theme or issue.

### 2. The Composite Learning Index

Published each spring, the Composite Learning Index (CLI) presents data on the progress of learning within specific communities, as well as Canada as a whole. The CLI combines a set of indicators encompassing the various facets of learning, and then generates a score for Canada and for individual communities. These scores reveal the extent to which Canadian communities have the learning conditions needed for economic and social success.

### 3. Thematic reports

CCL will release a series of reports that examine specific themes or issues related to learning across the lifespan. While the *State of Learning* furnishes an overview of Canada's progress in the field of learning, the thematic reports will provide a more in-depth analysis, with detailed examples of effective or emerging practices.

Through these reports, and through a wide range of research and knowledge exchange activities, the Canadian Council on Learning hopes to fulfil its vision of being a catalyst for lifelong learning across Canada.

# BIBLIOGRAPHY

- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (Washington, D.C.: 2000).
- Assembly of First Nations. *A First Nations Approach to Indicators*, Submitted to the Aboriginal Policy Research Conference (Ottawa: March 21, 2006).
- . "Breaking the Chains: First Nations Literacy and Self-determination," Report of the Assembly of First Nations Language and Literacy Secretariat (Ottawa: March 1994).
- . *First Nations Educational Jurisdiction—National Background Paper*, Prepared for a national and regional discussion in April 2001 (Ottawa: 2001).
- . *Indian Control of Indian Education*. Policy Paper presented to the Minister of Indian Affairs and Northern Development (Ottawa: 1972).
- Australia. Hon. John Howard, Prime Minister of Australia. *Skills for the Future*, Ministerial Statement to Parliament (Commonwealth of Australia, October 2006). Available at [www.pm.gov.au](http://www.pm.gov.au). Accessed on Oct. 20, 2006.
- Autti-Ramo, I. and M. Granstrom. "The Psychomotor Development During the First Year of Life of Infants Exposed to Intrauterine Alcohol of Various Duration: Fetal Alcohol Exposure and Development," *Neuropediatrics*, 22 (1991).
- Baldwin, J. *Innovation and Training in New Firms*, Research Paper No. 123 (Ottawa: Statistics Canada, Analytical Studies Branch, 2000).
- Battiste, Marie, and Sheelagh McLean. *State of First Nations Learning* (Ottawa: Canadian Council on Learning, Sept. 15, 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Nov. 29, 2006.
- Battiste, Marie. *State of Aboriginal Learning*, Background Paper for the National Dialogue on Aboriginal Learning (Ottawa: Canadian Council on Learning, Nov. 13–14, 2005).
- Beck, Leslie. "Grocery Gauntlet: Separating fat, fact and fiction," *The Globe and Mail* (Toronto: Oct. 4, 2006).
- Beckett, C., et al. "Do the Effects of Early Severe Deprivation on Cognition Persist into Early Adolescence? Findings from the English and Romanian Adoptees Study," *Child Development*, 77 (3) (2006).
- Bergeron L.P., et al. *Looking-Ahead: A 10-Year Outlook for the Canadian Labour Market 2004–2013* (Ottawa: Strategic Policy and Planning, Policy Research and Coordination Directorate, Human Resources and Social Development Canada, 2004).
- Berk, L. E. *Child Development*, Second Canadian Edition (Toronto: Pearson Education Canada, 2006).
- Boivin, M. "The Origin of Peer Relationship Difficulties in Early Childhood and their Impact on Children's Psychosocial Adjustment and Development," *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development, 2005). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Sept. 15, 2006.
- Boothby, Daniel. *Literacy Skills: Occupational Assignment and the Returns to Over- and Under-Education* (Ottawa: Statistics Canada and Human Resources Development Canada, January 2002).
- Bowlby, J. *Attachment and Loss*, Vol. 1 (New York, NY: Basic Books, 1969).
- Bradley, R. H., et al. "The Home Environments of Children in the United States. Part I: Variations by Age, Ethnicity, and Poverty Status," *Child Development*, 72 (2001).
- Bremner, J. D. "Does Stress Damage the Brain?" *Biological Psychiatry*, 45 (1999).
- Brooks, Barry. *Skills for Life and Work: The Journey from Policy Through Practice to Progress and Promise for All*, Tribal CTAD (UK: Lincoln House, 2006).
- Bukatko, D. and M. W. Daehler. *Child development: A Thematic Approach*, Fifth Edition (Boston: Houghton Mifflin, 2004).
- Bussi re, P., F. Cartwright and T. Knighton. *Measuring Up: Canadian Results of the OECD PISA Study—The Performance of Canada's Youth in Mathematics, Reading, Science and Problem Solving* (Ottawa: Minister of Industry, 2004). Available at [www.pisa.gc.ca/81-590-xie2004001.pdf](http://www.pisa.gc.ca/81-590-xie2004001.pdf). Accessed Nov. 20, 2006.
- Cameron, J., and S. Cameron. "The Economic Benefits of Increased Literacy," *Education for All Global Monitoring Report 2006* (Paris: UNESCO, 2005). Available at <http://unesdoc.unesco.org/images/0014/001459/145957e.pdf>.
- Canada Mortgage and Housing Corporation. "Revised Aboriginal Households," 2001 Census Housing Series, Issue 6, Research Highlights Socio-Economic Series 04-036 (Ottawa: Canada Mortgage and Housing Corporation, 2004).
- Canada. House of Commons. Standing Committee on Human Resources Development and the Status of Persons with Disabilities. *Raising Adult Literacy Skills: The Need for A Pan-Canadian Response* (Ottawa: Communication Canada Publishing, 2003).
- Canada. *Lifelong Learning Policy Paper*, prepared for the Canada-Aboriginal Peoples Roundtable (Ottawa: November 2004). Available at [www.aboriginalroundtable.ca](http://www.aboriginalroundtable.ca). Accessed on Nov. 26.
- . Report of the President of the Treasury Board of Canada: *Canada's Performance—The Government of Canada's Contribution*. Annual Report to Parliament 2005 (Ottawa: Treasury Board of Canada, 2005). Available at [www.tbs-sct.gc.ca](http://www.tbs-sct.gc.ca). Accessed on Nov. 27, 2006.
- . Royal Commission on Aboriginal Peoples. *Report of the Royal Commission on Aboriginal Peoples* (Ottawa: Canada Communications Group, 1996).
- . The Constitution Act, 1982, Section 35 (1) (Ottawa: Justice Canada, 1982). Available at <http://laws.justice.gc.ca>. Accessed on Oct. 20, 2006.
- Canadian Council on Learning. *Adult Literacy: A Synthesis of the Evidence* (Ottawa: British Columbia Ministry of Education, May 6, 2006).
- . *Canadian Post-secondary Education: A Positive Record – An Uncertain Future* (Ottawa: 2006). Available at [www.ccl-cca.ca/pse](http://www.ccl-cca.ca/pse).
- . *Composite Learning Index* (Ottawa: 2006). Available at [www.ccl-cca.ca/cli](http://www.ccl-cca.ca/cli).
- . "Falling Voter Turnout: Is it Linked to Diminished Civics Education?" *Lessons in Learning* (Ottawa: January 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Nov. 16, 2006.
- . "Good News: Canada's High-school Dropout Rates are Falling," *Lessons in Learning* (Ottawa: December 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).
- . "How Parents Can Foster Early Literacy," *Lessons in Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Nov. 26, 2006.
- . "Never too Old to Learn: Seniors and Learning in Canada." *Lessons in Learning* (Ottawa: Aug. 22, 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Oct. 2006.
- . "Raising the Score: Promoting Adult Literacy," *Lessons in Learning* (Ottawa: September 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed on Oct. 22, 2006.
- . *Survey of Canadian Attitudes toward Learning* (Ottawa: 2006). Available at [www.ccl-cca.ca/scal/](http://www.ccl-cca.ca/scal/).
- . "Understanding the Need for Targetted Workplace Learning Strategies," *Lessons in Learning* (Ottawa: February 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed on Oct. 22, 2006.
- Canadian Council on Social Development. *The Progress of Canada's Children and Youth 2006* (Ottawa: 2006). Available at [www.ccsd.ca](http://www.ccsd.ca). Accessed Oct. 1, 2006.
- Canadian Institute for Health Information. *Improving the Health of Young Canadians* (Ottawa: October 2005). Available at <http://secure.cihi.ca>. Accessed Nov. 16, 2006.
- Canadian Institute of Child Health. *The Health of Canada's Children—Third Edition* (Ottawa: 2000).
- Canadian Public Health Association. *Summary Report: Working Together to Improve the Literacy and Health of Canadians* (Ottawa: 2004).
- Carliner, S. et al. "A Review of the State of the Field of Workplace Learning: What we Know and What we Need to Know about Competencies, Diversity, e-learning, and Human Performance Improvement," Review commissioned by the Canadian Council on Learning and the Work and Learning Knowledge Centre (Ottawa: Canadian Council on Learning, 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca).
- Cartwright, Fernando, et al. *Linking Provincial Student Assessments with National and International Assessments* (Ottawa: Statistics Canada's Minister of Industry and the British Columbia Ministry of Education, 2003). Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Dec. 3, 2006.
- Centre for Research and Information on Canada. *Voter Participation in Canada: Is Canadian Democracy in Crisis? Paper #3* (Ottawa: 2001). Available at [www.cric.ca/](http://www.cric.ca/). Accessed Nov. 20, 2006.



- Chandler, Michael J., and Christopher Lalonde. "Cultural Continuity as a Hedge against Suicide in Canada's First Nations," *Transcultural Psychiatry*, 35, 2 (1998).
- CIO. 2006 Global Outsourcing Guide, Stephanie Overby, ed. Available at [www.cio.com](http://www.cio.com). Accessed on Oct. 20, 2006.
- Citizenship and Immigration Canada. Facts and Figures 2004 (Ottawa: 2004).
- . Recent Immigrants in Metropolitan Areas: Canada—A Comparative Profile based on the 2001 Census (Ottawa: 2005).
- Cohen, N. J. Language Impairment and Psychopathology in Infants, Children, and Adolescents (Thousand Oaks, California: Sage, 2001).
- Cohen, N.J. "The Impact of Language Development on the Psychosocial and Emotional Development of Young Children," *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development, March 14, 2005). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Sept. 12, 2006.
- Cornell, Stephen, and Joseph P. Kalt. "Alaska Native Self-Government and Service Delivery: What Works?" Joint Occasional Papers on Native Affairs, No. 2003-01 (Cambridge, MA: Harvard Project on American Indian Economic Development and Native Nations Institute for leadership, management and policy, 2003).
- Corson, David. "Community-based Education for Indigenous Cultures," *Language, Culture and Curriculum*, Vol. 11 (3) (Clevedon, UK: Multilingual Matters, 1998). Available at [www.multilingual-matters.net](http://www.multilingual-matters.net). Accessed on Nov. 26, 2006.
- Côté, S.M., et al. "The Development of Physical Aggression from Toddlerhood to Pre-adolescence: A Nationwide Longitudinal Study of Canadian Children," *Journal of Abnormal Child Psychology*, 34 (1) (2006).
- Coulombe, S., and J.F. Tremblay. *Human Capital and Canadian Provincial Standards of Living* (Ottawa: Statistics Canada, 2006).
- . Migration, Human Capital, and Skills Redistribution across the Canadian Provinces, Working Paper D-07 (Ottawa: HRSDC, Industry Canada and SSHRC, 2006).
- . "Public Investment in Skills: Are Canadian Governments Doing Enough?" *The Education Papers* (Toronto: C.D. Howe Institute, October 2005). Commentary No. 217.
- Coulombe, S., J.F. Tremblay, and S. Marchand. *Literacy Scores, Human Capital and Growth across Fourteen OECD Countries* (Ottawa: Statistics Canada, 2004). Catalogue No. 89-552-MIE.
- Council of Ministers of Education, Canada and Statistics Canada. *Education Indicators in Canada: Report of the Pan Canadian Education Indicators Program 2005* (Ottawa: 2005). Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Nov. 30, 2006.
- Cox, Sarah. *Early Childhood Development—Models and Studies* (Ottawa: Education Renewal Initiative, Secretariat, Indian and Northern Affairs Canada, Nov. 4, 2002).
- de Broucker, Patrice. *Without a Paddle: What to do About Canada's Young Dropouts* (Ottawa: Canadian Policy Research Networks Inc., 2005).
- Denton, F., C. Feaver and B. Spencer. "Immigration and Population Aging," *Canadian Business Economics*, Vol. 7, No. 1 (Ottawa: Canadian Association for Business Economics, 1999).
- Department of Education and Science. *Learning for Life: White Paper on Adult Education* (Dublin: Government Publications, July 2000).
- Desjardins, Richard, and Tom Schuller. "Introduction: Understanding the Social Outcomes of Learning," *Measuring the Effects of Education on Health and Civic Engagement Proceedings of the Copenhagen Symposium* (Paris: OECD, 2005).
- Doherty, Gillian. *Zero to Six: The Basis for School Readiness* (Ottawa: Human Resources Development Canada, 1997).
- Dominion Institute and Ipsos-Reid, 5th Annual Canada Day History Quiz, News release (Toronto: 2005). Available at [www.ipsos-na.com/news/pressrelease.cfm?id=1255](http://www.ipsos-na.com/news/pressrelease.cfm?id=1255). Accessed Nov. 16, 2006.
- Dominion Institute and TD Bank Financial Group. 2005 Annual Canada Day History Quiz, Conducted by the Innovative Research Group (Toronto: 2005). Available at [www.dominion.ca](http://www.dominion.ca). Accessed Nov. 16, 2006.
- Early Childhood Learning Knowledge Centre. "Why is High-quality Child Care Essential? The Link Between Quality Child Care and Learning," *Lessons in Learning* (Ottawa: Canadian Council on Learning, May 2006). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed Sept. 9, 2006.
- Ehri, L. C., et al. "Phonemic Awareness Instruction Helps Children Learn to Read: Evidence from the National Reading Panel's Meta-analysis," *Reading Research Quarterly*, 36 (2001).
- England. Department for Education and Skills. *Skills for Life: The National Strategy for Improving Adult Literacy and Numeracy Skills—Focus on Delivery to 2007* (Nottingham, England: Government of England, 2003).
- Evans, N. *Making Sense of Lifelong Learning: Respecting the Needs of All* (London: Routledge Falmer, 2003).
- First Nations Centre. *First Nations Regional Longitudinal Health Survey (RHS) 2002/03* (Ottawa: 2005). Available at [www.naho.ca](http://www.naho.ca). Accessed on Nov. 27, 2006.
- First Nations Education Steering Committee (FNEC). *The First Nations Schools Association School Measures and Data Collection Project—2006 Results* (Vancouver: 2006). Available at [www.fnesc.ca](http://www.fnesc.ca). Accessed on Nov. 27, 2006.
- Fried, P.A. "Tobacco Consumption During Pregnancy and its Impact on Child Development," *Encyclopedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development, 2002). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Oct. 12, 2006.
- Gift of Language and Culture website. Available at [www.giftoflanguageandculture.ca](http://www.giftoflanguageandculture.ca). Accessed on Nov. 27, 2006.
- Glogowska, et al. "Early Speech-and-language-impaired Children: Linguistic, Literacy, and Social Outcomes," *Developmental Medicine and Child Neurology*, 48 (2006).
- Government of Nunavut and Nunavut Tunngavik Incorporated. *Background Paper submitted to the Canada-Aboriginal Peoples Roundtable* (Iqaluit and Ottawa: November 2004).
- Green, David A. and W. Craig Riddell. *Literacy and the Labour Market: The Generation of Literacy and its Impact on Earnings* (Ottawa: Statistics Canada, February 2005).
- Green, David A., and W. Craig Riddell. *Literacy, Numeracy and Labour Market Outcomes in Canada* (Ottawa: Statistics Canada and Human Resources Development Canada, January 2001).
- Gunderson, M., L. Jacobs and F. Vaillancourt. *The Information Technology (IT) Labour Market in Canada: Results from the National Survey of IT Occupations* (Ottawa: Software Human Resource Council, 2005).
- Hart, B., and T. R. Risley. *Meaningful Differences in the Everyday Experience of Young American Children* (Baltimore, U.S.: Paul H. Brookes Publishing, 1995).
- Haveman, R., and B. Wolfe. *Succeeding Generations and the Effects of Investment in Children* (New York: Russell Sage Foundation, 1994).
- Health Canada. *Aboriginal Head Start in Urban and Northern Communities—Program and Participants 2001* (Ottawa: 2002). Available at [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca). Accessed Nov. 26, 2006.
- . *A Statistical Portrait on the Health of First Nations in Canada* (Ottawa: 2005).
- . *Aboriginal Diabetes Initiative website*. Available at [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca). Accessed on Nov. 8, 2006.
- Heckman, James J. *Invest in the Very Young* (Chicago: Ounce of Prevention Fund and the University of Chicago Harris School of Public Policy Studies, 2000). Available at [www.ounceofprevention.org](http://www.ounceofprevention.org). Accessed Sept. 26, 2006.
- Hodgson, Kathy. "State of Métis Learning," *Background Paper for the National Dialogue on Aboriginal Learning* (Ottawa: Canadian Council on Learning, November 13–14, 2005).
- Howe, E. "Education and Lifetime Income for Aboriginal People in Saskatchewan," *Aboriginal Policy Research: Setting the Agenda for Change*, Vol. 1, J.P. White, P. Maxim and D. Beavon, eds. (Toronto: Thompson Education Publishing, 2004).
- . "Saskatchewan with an Aboriginal Majority: Education and Entrepreneurship," *The Saskatchewan Institute of Public Policy, Public Policy Paper Series #44* (Regina: University of Regina, September 2006).
- Howe, Paul. "Where Have all the Voters Gone?" *Inroads: The Canadian Journal of Opinion*, No. 12 (Winter/Spring 2003).

# BIBLIOGRAPHY

- Hull, Jeremy. *Post-Secondary Education and Labour Market Outcomes Canada*, 2001 (Winnipeg: Prologica Research Inc, 2005).
- Husén, T., and A.C. Tuijnman. "The Contribution of Formal Schooling to the Increase in Intellectual Capital," *Educational Researcher*, Vol. 20 (7) (1991).
- Indian and Northern Affairs Canada. *National Assessment of Water and Wastewater Systems in First Nations Communities—Summary Report May 2003* (Ottawa: May 2003). Available at [www.ainc-inac.gc.ca](http://www.ainc-inac.gc.ca). Accessed on Nov. 26, 2006.
- Indian Residential Schools Resolution Canada website. Available at [www.irsr-rqpi.gc.ca/english](http://www.irsr-rqpi.gc.ca/english). Accessed on Nov. 27, 2006.
- Institute of Medicine. *Health Literacy: A Prescription to End Confusion* (Washington, D.C.: 2004).
- International Council for Adult Education. *Agenda For the Future: Six Years Later*, Presentation to CONFINTEA+6, a UNESCO review conference on Adult Education and Literacy (Bangkok Thailand : Sept. 8-11, 2003).
- International Institute for Management Development. *World Competitiveness Yearbook 2004* (Lausanne, Switzerland: 2004).
- Inuit Tapiriit Kanatami. *Backgrounder on Inuit and Education* (Ottawa: 2004) Available at [www.aboriginalroundtable.ca](http://www.aboriginalroundtable.ca). Accessed on Nov. 27, 2006.
- . *State of Inuit Learning in Canada* (Ottawa: July, 2005). Available at [www.ccl-cca.ca](http://www.ccl-cca.ca). Accessed on Nov. 13, 2006.
- Jefferis B., C. Power and C. Hertzman. "Birthweight, Childhood Socioeconomic Environment, and Cognitive Development in the 1958 British Birth Cohort Study," *British Medical Journal*, 325(7359):305 (Aug. 10, 2002).
- Junor, S., and A. Usher. "Price of Knowledge: Access and Student Finance in Canada," *Millennium Research Series* (Montreal: Millennium Scholarship Foundation, 2004).
- Kapsalis, Constantine. *Catching Up with the Swedes: Probing the Canada-Sweden Literacy Gap* (Ottawa: Human Resources Development Canada, January 2001).
- Katenies Research and Management Services, and Chignecto Consulting Group Inc. *Review of the Indian Studies Support Program Component of the PSE Program* (Ottawa: Assembly of First Nations, 2006).
- Kavanagh, Barbara. *Reaching for Success: Considering the Achievements and Effectiveness of First Nations Schools*, written with the First Nations Education Steering Committee and Standards project Advisory Committee (Vancouver: July 1998).
- Keating, D. P. and F. K. Miller. "Individual Pathways in Competence and Coping: From Regulatory Systems to Habits of Mind," *Developmental Health and the Wealth of Nations: Social, Biological and Educational Dynamics* (New York: Guilford Press, 1999).
- Kershaw, P., et al. *The British Columbia Atlas of Child Development* (Vancouver: Human Early Learning Partnership and Western Geographical Press, 2005).
- Kohen, D., C. Hertzman and M. Weins. "Environmental Changes and Children's Competencies," Technical Report, W-98-15E (Ottawa: Applied Research Branch of Human Resources Development Canada, 1998).
- Krahn, Harvey and Graham S. Lowe. *Literacy Utilization in Canadian Workplaces* (Ottawa: Statistics Canada and Human Resources Development Canada, 1998).
- Kwan, Brenda, Jim Frankish and Irv Rootman. *The Development and Validation of Measures of "Health Literacy" in Different Populations* (Vancouver: Institute of Health Promotion Research, University of British Columbia). To be published on [www.ihpr.ubc.ca](http://www.ihpr.ubc.ca).
- Lankshear, Colin. "Introduction," *Literacy and the New Work Order* (London: National Institute of Adult Continuing Education, 1998).
- Lavoie, M., and R. Roy. *Employment in the Knowledge Based Economy: A Growth Accounting Exercise for Canada*, Working Paper R-98-8E (Ottawa: Applied Research Branch, HRSDC, 1998).
- Lefebvre, P., and P. Merrigan. *Family Background, Family Income, Maternal Work and Child Development* (Ottawa: Human Resources Development Canada, 1998).
- Lipps, G., and J. Yiptong-Avila. *From Home to School—How Canadian Children Cope* (Ottawa: Statistics Canada's Culture, Tourism and the Centre for Education Statistics, 1999). Catalogue No. 89F0117XIE. Available at [www.statcan.ca](http://www.statcan.ca). Accessed Sept. 11, 2006.
- Livingston, D. W. *Adults' Informal Learning: Definitions, Findings, Gaps, and Future Research*, NALL Working Paper #21 (Toronto: The Research Network on New Approaches to Lifelong Learning, 2001).
- Livingston, D. W., and R. Roth. *Workers' Knowledge: An Untapped Resource in the Labour Movement*, presented at the International Conference on Union Growth, Centre for the Study of Education and Work Ontario Institute for Studies in Education/ University of Toronto (Toronto: April 30–May 1, 2001).
- . *Mapping the Iceberg*, NALL Working Paper #54 (Toronto: The Research Network on New Approaches to Lifelong Learning, 2002).
- Louis J. *Stages of Language Development* (Moorehead: From the Parent-Child Communication Program of Minnesota State University). Available at [www.mnstate.edu/pccp](http://www.mnstate.edu/pccp). Accessed Oct. 13, 2006.
- Machin, Stephen, and Anna Vignoles. *The Economic Benefits of Training to the Individual, the Firm and the Economy: The Key Issues* (London: Centre for the Economics of Education, 2001).
- Mackay, Ron, and Lawrence Myles. "A Major Challenge for the Education System: Aboriginal Retention and Dropout," *First Nations Education in Canada: The Circle Unfolds*, Marie Battiste and Jean Barman, eds. (Vancouver: UBC Press, 1995).
- McCain Norrie, Margaret, and J. Fraser Mustard. *Early Years Study Final Report* (Government of Ontario, Ontario Children's Secretariat, 1999). Available at [www.children.gov.on.ca](http://www.children.gov.on.ca). Accessed Oct. 14, 2006.
- McCartney, K. "Current Research on Child Care Effects," *Encyclopaedia on Early Childhood Development*, Online version (Montreal: Centre of Excellence for Early Childhood Development, 2004). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed Nov. 2, 2006.
- McCreary Centre Society. *Healthy Youth Development Highlights from the 2003 Adolescent Health Survey III* (Vancouver: 2004).
- McEwen, B. S. "The Effects of Stress on Structural and Functional Plasticity in the Hippocampus," *Neurobiology of Mental Illness*. (New York: Oxford University Press, 1999).
- McHardy, M., and E. O'Sullivan. *First Nations Community Well-Being in Canada: The community well-being index (CWB)* (Ottawa: Strategic Research and Analysis Directorate, Indian and Northern Affairs Canada, 2004).
- McKay, Heather. *Action Schools! B.C. Phase I (Pilot) Evaluation Report and Recommendations* (Victoria, B.C.: Ministry of Health Services, Nov. 2004). Available at [www.healthservices.gov.bc.ca/cpa/publications](http://www.healthservices.gov.bc.ca/cpa/publications). Accessed Nov. 21, 2006.
- McKenzie, Helen. *Citizenship Education in Canada* (Ottawa: Government of Canada's Depository Services Program, 1993). Available at <http://dsp-psd.communication.gc.ca>. Accessed Sept. 13, 2006.
- Milan, Anne. "Willing to Participate: Political Engagement of Young Adults," *Canadian Social Trends* (Ottawa: Statistics Canada, Winter 2005). Catalogue No. 11-008. Available at [www.statcan.ca/](http://www.statcan.ca/). Accessed Nov. 20, 2006.
- Miller, Gord. "Ecological Approach to School Health Promotion Review of Literature," for CIHR-sponsored project *The Multifaceted Potential of the School as an Environment for Health Promotion* (Ottawa: School Health Research Network, 2003). Available at [www.schoolhealthresearch.org/pdf](http://www.schoolhealthresearch.org/pdf). Accessed Oct. 1, 2006.
- Mingat, A. and J. Tan. "The Full Social Returns to Education: Estimates Based on Countries' Economic Growth Performance," *Human Capital Development Working Papers* (Washington, D.C.: The World Bank Group, 1996).
- Minister's National Working Group on Education. *Our Children—Keepers of the Sacred Knowledge* (Ottawa: Indian Affairs and Northern Development Canada, 2002).
- Morgan, Nancy A. "Building a Foundation for First Nations Jurisdiction over Education," *Background Paper prepared for a joint AFN-INAC education policy forum* (Vancouver: March 2, 2005).
- Morissette R., Y. Ostrovsky and G. Picot. *Relative Wage Patterns among the Highly Educated in a Knowledge-based Economy*, Research Paper No. 232 (Ottawa: Statistics Canada, Analytical Studies Branch, 2004). Catalogue No. 11F0019MIE.
- Murray, S. *Achievement at Māori immersion & bilingual schools—Update for 2004 results* (Wellington: Demographic and Statistical Analysis Unit, New Zealand Ministry of Education, 2005). Available at [educationcounts.edcentre.govt.nz](http://educationcounts.edcentre.govt.nz). Accessed on Nov. 27, 2006.

- Murray, Scott et al. *Health Literacy in Canada: The Matter in Empirical Perspective* (Ottawa: Statistics Canada and the Canadian Council on Learning, Forthcoming).
- National Institute on Deafness and Other Communication Disorders. *Statistics on Voice, Speech, and Language* (Bethesda: National Institute on Deafness and Other Communication Disorders; National Institutes of Health). Available at [www.nidcd.nih.gov/health/statistics/vsl.asp#3](http://www.nidcd.nih.gov/health/statistics/vsl.asp#3). Accessed Sept. 14, 2006.
- Nault, F. "Key Results from the International Adult Literacy and Life Skills Survey 2003," presentation to the Strategic Management Group, Canadian Education Statistics Council (Ottawa: Statistics Canada, 2005).
- Norris, M.J. "Canada's Aboriginal Languages," *Canadian Social Trends*, 51 (Ottawa: Statistics Canada, Winter 1998).
- Norris, M.J., and L. Jantzen. *From Generation to Generation: Survival and Maintenance of Canada's Aboriginal Languages within Families, Communities, and Cities* (Ottawa: Indian and Northern Affairs Canada and Heritage Canada, January 2004).
- Nunavut Bureau of Statistics. *2001 Nunavut Household Survey* (Iqaluit: 2002). Available at [www.tunngavik.com](http://www.tunngavik.com). Accessed on Dec. 1, 2006.
- Nunavut Sivuniksavut Training Program website. Available at [www.nstraining.ca](http://www.nstraining.ca). Accessed on Nov. 14, 2006.
- OECD and Centre for Educational Research and Innovation (CERI). *Measuring the Effects of Education on Health and Civic Engagement: Proceedings of the Copenhagen Symposium* (Paris: 2006). Available at [www.oecd.org/dataoecd/23/61/37437718.pdf](http://www.oecd.org/dataoecd/23/61/37437718.pdf). Accessed on Oct. 25, 2006.
- OECD. *Beyond Rhetoric: Adult Learning Policies and Practices* (Paris: 2003).
- *Draft Country Background Report: Adult Basic Skills and Formative Assessment Practices in England* (Paris). Available at [www.oecd.org/dataoecd/40/42/37406270.pdf](http://www.oecd.org/dataoecd/40/42/37406270.pdf). Accessed on Nov. 12, 2006.
- *Early Childhood Education and Care Policy: Canada Country Note* (Paris: OECD Directorate for Education). Available at [www.oecd.org](http://www.oecd.org). Accessed Sept. 26, 2006.
- *Education at a Glance* (Paris: 2006).
- *From Initial Education to Working life—Making Transitions Work* (Paris: 2000).
- *Health at a Glance: OECD Indicators 2005* (Paris: OECD, 2005).
- *Living Longer, Working Longer* (Paris: 2005).
- *OECD Thematic Review of Adult Learning: Canada Country Note* (Paris: 2003). Available at [www.oecd.org](http://www.oecd.org). Accessed on Oct. 22, 2006.
- *Starting Strong II: Early Childhood Education and Care* (Paris: OECD, 2006) Available at [www.oecd.org](http://www.oecd.org). Accessed Oct. 12, 2006.
- Osberg, Lars. *Schooling, Literacy and Individual Earnings* (Ottawa: Statistics Canada and Human Resources Development Canada, June 2000).
- Osbourne, K. "Public Schooling and Citizenship in Canada," *Canadian Ethnic Studies*, Vol. 32 No. 1 (Calgary: Canadian Ethnic Studies Association, 2000).
- Pacific Issues Partners. *Canadian Attitudes on Post-secondary Education* (Ottawa: Canadian Council on Learning, 2006). Available at [www.ccl-cca.ca/psepoll](http://www.ccl-cca.ca/psepoll).
- Parcel G. S. et al. "School Promotion of Healthful Diet and Physical Activity: Impact on Learning Outcomes and Self-reported Behavior," *Health Education Quarterly*, 16 (2) (Summer 1989).
- Parliamentary Research Branch. *Suicide Among Aboriginal People: Royal Commission Report* (Ottawa: Parliamentary Research Branch, February 1995).
- Peters, V. *Working and Training: First Results of the 2003 Adult Education and Training Survey* (Ottawa: Statistics Canada's Culture, Tourism and the Centre for Education Statistics Division, 2004). Catalogue No. 81-595-MIE.
- Prasil, S. *Registered Apprentices: The Class of 1992, a Decade Later* (Ottawa: Statistics Canada, Culture, Tourism, and the Centre for Education, 2005). Catalogue No. 81-595-MIE.
- Public Health Agency of Canada. *How does Literacy Affect the Health of Canadians?* (Ottawa: Public Works and Government Services Canada, 1998). Available at [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca). Accessed on Oct. 16, 2006.
- Public Health Agency of Canada. *Aging and Seniors*, website. Available at [www.phac-aspc.gc.ca/seniors-aines/](http://www.phac-aspc.gc.ca/seniors-aines/). Accessed on Oct. 17, 2006.
- Public Health Agency of Canada. *Canadian Physical Activity Guides for Children and Youth* (Ottawa: Public Works and Government Services Canada, 2002). Available at [www.phac-aspc.gc.ca/pauuap/paguide/](http://www.phac-aspc.gc.ca/pauuap/paguide/). Accessed Sept. 19, 2006.
- Public Health Agency of Canada. *Healthy Development of Children and Youth: The Role of the Determinants of Health* (Ottawa: Health Canada, 1999). Available at [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca). Accessed Oct. 14, 2006.
- Quigley, B. Allan, Sue Folinsbee and Wendy L. Kraglund-Gauthier. *State of the Field Report: Adult Literacy* (Ottawa: Canadian Council on Learning, May 2006).
- R.A. Malatest & Associates Ltd. *Aboriginal Peoples and Post-Secondary Education—What Educators Have Learned* (Montreal: Canada Millennium Scholarship Foundation, 2004).
- Robins, H., and Eugenius M. Uhlenbeck, eds. *Endangered Languages* (Oxford: Berg Publishers, 1991).
- Rootman, Irving, and Barbara Ronson. "Literacy and Health Research in Canada: Where Have We Been and Where Should We Go?" *Canadian Journal of Public Health*, Vol. 96, Supplement 2 (March–April 2005).
- Rootman, Irving. *What We Know and Don't Know About School Health*. Presentation, School Health Workshop held in Vancouver, Feb. 13–14, 2004 (School Health Research Network, 2004). Available at [www.schoolhealthresearch.org](http://www.schoolhealthresearch.org). Accessed Oct. 2, 2006.
- Rotermann, Michelle. "Seniors' Health Care Use," Supplement to *Health Reports*, Vol. 16 (Ottawa: Statistics Canada, 2006). Catalogue No. 82-003.
- Rothman, R.L. et al. "Influence of Patient Literacy in the Effectiveness of a Primary Care-based Diabetes Disease Management Program," *The Journal of the American Medical Association*, Vol. 292;1711-6 (Chicago, IL: American Medical Association, 2004).
- Sabourin, Beverly Anne, and Peter Andre Globensky. *Aboriginal Literacy in Canada: Sustaining the Language of Literacy* (Ottawa: National Literacy Secretariat).
- Sarginson R.J. *Literacy and Health: A Manitoba Perspective* (Winnipeg: Literacy Partners of Manitoba, 1997).
- Scarr, S. and R.A. Weisberg. "The Influence of Family Background on Intellectual Attainment," *American Sociological Review*, Vol. 43.
- Schellenberg, Grant. *2003 General Social Survey on Social Engagement, Cycle 17: An Overview of Findings* (Ottawa: Statistics Canada, 2004).
- Shalla, V and Schellenberg, G. *The Value of Words: Literacy and Economic Security in Canada* (Ottawa: Statistics Canada and Human Resources Development Canada, 1998).
- Simon Management Services. *A Study of Educational Cost Drivers to First Nations Education*. Prepared for the Assembly of First Nations and Indian Affairs Canada Band Operated Formula Funding Working Group (April 2006).
- Skof, Karl. *Trends in Registered Apprenticeship Training in Canada* (Ottawa: Statistics Canada, 2006). Catalogue No. 81-004-XIE. Available at [www.statcan.ca](http://www.statcan.ca).
- Solan, H., and R. Moslan. "Children in Poverty: Impact on Health, Visual Development and School Failure," *Journal of Optometric Visual Development*, 28 (1997).
- St. Clair, Ralf. *Building a Community: Reviewing National Literacy Secretariat Research Support 1998–2003* (Ottawa: National Literacy Secretariat, 2004).
- St. Clair, Ralf. *Research Guidelines for the National Literacy Secretariat 2004–2009*, Draft (Simon Fraser University, September 2004).
- Statistics Canada and Human Resources and Skills Development Canada. *Building on our Competencies: Canadian Results of the International Adult Literacy and Life Skills Survey 2003* (Ottawa: 2005). Catalogue No. 89-617-XIE.
- Statistics Canada and Human Resources Development Canada. *Reading the Future: A Portrait of Literacy in Canada* (Ottawa: 1996).
- Statistics Canada and OECD. *International Adult Literacy and Life Skills Survey (IALSS)* (Ottawa and Paris: 2005). Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Nov. 27, 2006.
- *Literacy, Economy and Society: Results of the First International Adult Literacy Survey* (Ottawa and Paris: 1994)
- *Literacy in the Information Age: Final report of the Adult Literacy Survey* (Ottawa and Paris: 2000).

# BIBLIOGRAPHY

- . Literacy Skills for the Knowledge Society: Further Results of the International Adult Literacy Survey (Ottawa and Paris: 1997).
- . Learning a Living: First Results of the Adult Literacy and Life Skills Survey (Ottawa and Paris: 2005).
- Statistics Canada. Aboriginal Peoples of Canada: A Demographic Profile (Ottawa: 2001). Catalogue No. 96F0030XIE2001007.
- . Aboriginal Peoples Survey 2001.
- . Canadian Community Health Survey, Cycle 3.1 (Ottawa).
- . "Canadian Internet Use Survey 2005," *The Daily* (Ottawa: August 15, 2006). Available at [www.statcan.ca](http://www.statcan.ca). Accessed Nov. 17, 2006.
- . Caring Canadians, Involved Canadians—Highlights from the 2004 Canada Survey of Giving, Volunteering and Participating (Ottawa: 2006) Catalogue No. 71-542-XIE.
- . Census 2001 (Ottawa). Catalogue No. 97F0007XCB2001001.
- . Enhanced Student Information System (Ottawa). Custom data request.
- . Labour Force Historical Review (Ottawa: Statistics Canada, Labour Statistics Division, February 2006).
- . "Population Projections 2005 to 2031," *The Daily* (Ottawa: Dec. 15, 2005). Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Oct. 18, 2006.
- . Population Projections for Canada, Provinces and Territories. 2005–2031. (Ottawa: 2005). Catalogue No. 91-520-XIE.
- . Projections of the Aboriginal populations, Canada, provinces and territories: 2001 to 2017 (Ottawa: 2005). Catalogue No. 91-547-XWE. Available at [www.statcan.ca](http://www.statcan.ca). Accessed on Nov. 27, 2006.
- Storch, S. A., and G. J. Whitehurst. "Oral Language and Code-related Precursors of Reading: Evidence from a Longitudinal Structural Model," *Developmental Psychology*, 38 (2002).
- Tamis-LeMonda, C. S., M. H. Bornstein and L. Baumwell. "Maternal Responsiveness and Children's Achievement of Language Milestones," *Child Development*, 72 (2001).
- Tamkin, Penny. *Measuring the Contribution of Skills to Business Performance: A Summary for Employers* (Brighton: Institute for Employment Studies, 2005). Available at [www.cipd.co.uk](http://www.cipd.co.uk).
- The Conference Board of Canada. *Brain Gain—The Economic Benefits of Recognizing Learning and Learning Credentials in Canada* (Ottawa: 2001). Available at [www.conferenceboard.ca](http://www.conferenceboard.ca)
- . "Breaching the Barriers to Workplace Literacy, Phase I Report," *Overcoming Barriers: Effective Strategies for Enhancing Employee Literacy and Learning in the Workplace Research Project* (Ottawa: 2001).
- The Federal/Provincial/Territorial Communiqué on Early Childhood Development. Available at [www.ecd-elcc.ca](http://www.ecd-elcc.ca).
- The Institut de la statistique de Québec. *Quebec Longitudinal Study of Child Development* (Quebec). Available at [www.jesuisjeserai.stat.gouv.qc.ca/](http://www.jesuisjeserai.stat.gouv.qc.ca/).
- Tomlin, B. "Literacy as an Outcome of Language Development and its Impact on Children's Psychosocial and Emotional Development," *Encyclopedia on Early Childhood Development*, Online version. (Montreal: Centre of Excellence for Early Childhood Development, March 2005). Available at [www.excellence-earlychildhood.ca](http://www.excellence-earlychildhood.ca). Accessed on Sept. 12, 2006.
- Trasti N., and T. Vik. "Smoking in Pregnancy and Children's Mental and Motor Development at Age 1 and 5 Years," *Early Human Development* 55 (2) (1999).
- Tuijnman, A. "Themes and Questions for a Research Agenda on Lifelong Learning. Supporting Lifelong Learning," *Making Policy Work*, Vol. 3 (London: Open University, 2002).
- Turcotte, J., A. Léonard and C. Montmarquette. "New Evidence on the Determinants of Training in Canadian Business Locations," *The Evolving Workplace Series* (Ottawa: Statistics Canada and HRDC, 2005). Catalogue No. 71-584-MIE.
- United Kingdom. Ministry of Education and Employment, *Skills for Life: The National Strategy for Improving Adult Literacy and Numeracy Skills*, Foreword. Rt. Hon David Blunkett M.P., Secretary of State for Education and Employment. Available at [www.dfes.gov.uk](http://www.dfes.gov.uk). Accessed on Oct. 5, 2006
- United Nations Educational, Scientific and Cultural Organization (UNESCO). *Education for All—Global Monitoring Report 2006* (Paris: UNESCO Publishing, 2005).
- . *Atlas of the World's Languages in Danger of Disappearing*, Stephen A. Wurm, ed. (Paris: 2006).
- . *Literacy—Multiple Meanings and Dimensions*. Education Sector Position Paper (Unpublished).
- . "Strong Foundations: Early Childhood Care and Education," *Education for All Global Monitoring Report 2007* (Paris: UNESCO Publishing, 2006).
- United Nations General Assembly. *The Universal Declaration of Human Rights*. Adopted and proclaimed by General Assembly resolution 217 A (III) of Dec. 10, 1948 (New York: 1948).
- . *United Nations Literacy Decade: Education for All*, Adopted and proclaimed by General Assembly resolution 56/116 of January 2002 (New York: 2002).
- United States. Department of Education and Office of Educational Research and Improvement. "Summary of the Research Design Symposium on Family Literacy," *Family Literacy: Directions in Research and Implications for Practice* (Washington: January 1996). Available at [www.ed.gov/pubs/FamLit/intro.html](http://www.ed.gov/pubs/FamLit/intro.html). Accessed Nov. 30, 2006.
- Vick-Westgate, Ann. "Nunavik: Inuit-controlled education in Arctic Quebec," *Northern Lights Series* (Calgary: University of Calgary Press, 2002).
- Wagner, Daniel A. *Literacy and Adult Education—Thematic Studies* (Paris: UNESCO, 2001).
- Whitehurst, G. J., and C. J. Lonigan. "Child Development and Emergent Literacy," *Child Development*, 69 (3) (1998).
- Willms, J. D. "Quality and Inequality in Children's Literacy: The Effects of Families, Schools, and Communities," *Developmental Health and the Wealth of Nations: Social, Biological and Educational Dynamics* (New York: Guilford Press, 1999).
- . *Student Engagement at School: A Sense of Belonging and Participation Results from PISA 2000* (Paris: OECD, 2003). Available at [www.oecd.org](http://www.oecd.org). Accessed Sept. 30, 2006.
- . *Vulnerable Children* (Edmonton: University of Alberta Press, 2002).
- World Health Organization. "Young People's Health in Context: Health Behaviour in School-aged Children Study: International Report from the 2001–2002 Survey," *Health Policy for Children and Adolescents*, No. 4, Candace Currie et al, eds. (2004). Available at [www.who.int/school\\_youth\\_health/en/](http://www.who.int/school_youth_health/en/).
- World Health Organization. *Health Promotion Glossary*, WHO/HPR/HEP/98.1 (Geneva: 1998).
- Wotherspoon, Terry, and Bernard Schissel. "Marginalization, Decolonization and Voice: Prospects for aboriginal education in Canada," *Pan-Canadian education research agenda*, Lenoir, Y., et al., eds. (Ottawa: Canadian Society for Studies in Education, 2000).
- Yan, Beiling. "Demand for Skills in Canada: The Role of Foreign Outsourcing and Information-Communication Technology," *Economic Analysis (EA) Research Paper Series* (Ottawa: Statistics Canada, 2005) Catalogue No. 11F0027MIE, No. 35.



[www.ccl-cca.ca](http://www.ccl-cca.ca)

---

**Ottawa Office**

215–50 O'Connor Street  
Ottawa ON Canada  
K1P 6L2

Tel.: 613.782.2959  
Fax: 613.782.2956

**Vancouver Office**

1805–701 West Georgia Street  
P.O. Box 10132  
Vancouver BC Canada V7Y 1C6

Tel.: 604.662.3101  
Fax: 604.662.3168