

2005–2010

TAKING STOCK OF LIFELONG LEARNING IN CANADA: Progress or Complacency?



Background Report
August 2010

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The Canadian Council on Learning is an independent, not-for-profit corporation. Its mandate is to provide evidence-based information to Canadians so they can make the best decisions about learning throughout all stages of life, from early childhood through to the senior years.

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MESSAGE FROM THE PRESIDENT AND CEO



Paul Cappon
President and CEO

In Ottawa on March 30, 2010, the Canadian Council on Learning (CCL) presented a stock taking to parliamentarians from all political parties.

Why a stock taking? As in any field of human endeavour, serious intent to improve in learning demands rigorous, regular and honest assessment of advances made and not made over a defined period of time. That is why schools employ report cards.

During its first iteration, corresponding to the federal funding that supported CCL from its inception in 2004 until March, 2010, CCL performed a unique function. As Canada's only national organization reporting to residents in every corner of the land on progress in all phases of learning across the lifecycle (from early childhood through K-12 education, post-secondary education, workplace training and adult literacy and learning) CCL served as a catalyst towards a national discussion on the social and economic importance of learning. *Taking Stock of Canada's Progress in Lifelong Learning: Progress or Complacency?* builds on our report to parliamentarians. It brings to Canadians in richer detail and context the information and analysis that we shared with the parliamentary bodies which allocated the funding to CCL that the Government of Canada terminated in March.

It is universally acknowledged that learning, as defined broadly to encompass much more than school-based education, is a main driver of many attributes that societies value: individual opportunity and development, productivity, innovation, prosperity, and social cohesion. That was the reasoning behind the articulation in 2006 by the Government of Canada of a "Knowledge Advantage" that would provide a "leg up" in a fiercely competitive global environment.

But have we made the progress anticipated by government in building a "knowledge advantage?" Are there domains in which we are surpassing other member countries of the Organisation for Economic Co-operation and Development (OECD)? Where are we falling behind?

CCL emphasizes that past results do not guarantee future success. The fundamental issue is whether Canada is establishing conditions for future international competitiveness in knowledge and learning. Is Canada making the progress in lifelong learning that will differentiate societies that flourish from those that flounder; or have we—at our peril—become complacent?

It appears common in Canadian discourse on issues of education and learning to begin with an assertion to the effect that Canada is doing well; followed by the usual admission that improvement is, of course, desirable and necessary. This report does not dabble in polite niceties because such misleading pleasantries merely mask the current reality that is CCL's task to set before Canadians.

When we stood before parliamentarians in March, 2010, to elucidate our findings, conclusions, and recommendations, our goal was to provide decision-makers with the information and analysis they need to develop effective approaches to learning. These approaches are the only means of keeping Canada competitive in the global, knowledge-based economy. We gave them some good news, but we were also frank about the bad news. This included the fact that Canada, unlike many OECD countries, possesses no coherent, cohesive or coordinated national approach to education and lifelong learning. Yet, our international competitors either already have one, or they are working diligently to create one.

That means that as we stand still, we are losing ground. We insisted bluntly that Canada put its house in order. We described the consequences of failing to recognize the urgency to act, as well as some attractive alternatives leading to improvement in learning outcomes, that are open to this country.

This Taking Stock report is intended to provide more than a summation of CCL's research and analysis. It offers an opportunity to translate the rhetoric of lifelong learning into action that can make a difference. There still remains time for Canada to establish the conditions required for success in the future. Will we seize that opportunity?

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

President and CEO

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INTRODUCTION

Taking Stock of Lifelong Learning in Canada

There is no doubt that skills and education matter. For a country, skills and education are linked to higher productivity, innovation and economic growth. For individuals, education and training have the potential to return substantial benefits, including better wages and job satisfaction, fewer periods of unemployment, and improved health and quality of life.

Learning, however, is not a commodity with a fixed end-point, such as graduation from high school or the attainment of a post-secondary credential. Rather, learning is a continuous, individualized process that occurs across the life course, from early childhood through to the adult years. It is also our greatest safeguard against an uncertain future as we face the challenges of increased globalization, including rapid advancements in new technologies and demand for innovation and higher productivity.

Since its founding in 2004, CCL has committed its efforts to gaining a comprehensive understanding of how Canadians are faring as lifelong learners. March 2010 marked the end of CCL's first mandate, providing CCL with a timely opportunity to take stock of what we have learned over the past six years.

The intent of *Taking Stock of Canada's Progress in Lifelong Learning*, therefore, is to consolidate our key findings, insights and recommendations, and report back to Canadians on where progress has been made and which areas are still in need of improvement.

With a solid record of evidence-based research, CCL is in a unique position to reiterate a fundamental question which concerns us all: Is Canada making progress in lifelong learning, or have we—at our peril—become complacent?

This report brings together data and information presented in CCL publications over the past five years, and draws on a wide range of respected sources, including the Organisation for Economic Co-operation and Development (OECD), Statistics Canada, and Human Resources and Skills Development Canada.

The Lifelong Learning Imperative

Over the past several decades the concept of lifelong learning has gained momentum as a focus of Canadian and international policy discussions aimed at fostering economic and social well-being. As the Canadian Alliance of Education and Training Organizations (CAETO) noted in 2003, “few phrases have enjoyed the longevity and hopeful buoyancy within Canada’s educational and social argot as that of lifelong learning.”¹

Indeed, in 1996 Education Ministers of the OECD had already concluded that “lifelong learning for all” was a necessary response to the complex demands of everyday life and work, and were calling on member countries to develop innovative lifelong-learning policies in response to these challenges.

The imperative to create a society of lifelong learners has become all the more critical because of the mounting pressures resulting from increased globalization:

“In a knowledge-driven economy, the continuous updating of skills and the development of lifelong learning will make the difference between success and failure, and between competitiveness and decline.”

– David Blunkett, former United Kingdom Secretary of State for Education and Employment

Canada’s Learning Paradox

Canada has much to celebrate with regard to the learning of its citizens. More than half of our adult population is equipped with some form of post-secondary education, the second-highest level worldwide. Canadian students have reading, math, science and problem-solving skills that are above the OECD average. Dropout rates among Canadian youth have improved steadily over the past 20 years. More than ever before, Aboriginal people in this country are completing high school and pursuing post-secondary education.

Despite these positive signs, there are also signs of systemic weakness that, if left unchecked, will inhibit Canada's capacity to grow and prosper. Indeed, Canada cannot claim to be a learning society until we have confronted the many learning paradoxes that undermine further progress.

These paradoxes are evident throughout each stage of the life cycle—in early childhood, during the years of learning in school, the period of post-secondary education, and in adulthood.

Early childhood education and learning

It is widely recognized that quality early-childhood education and learning (ECEL) has critical implications for well-being and later success in school, at work and in the community—yet investments in early childhood are the lowest among OECD countries.

However, many of our young children are entering school without the foundation needed to acquire literacy and numeracy skills, setting the stage for poor school performance and diminished life prospects in the areas of employment, wages and health. Without appropriate measures to provide greater understanding of quality, access, financing and policy of ECEL programs, particularly at the national level, we do not have a clear understanding of how well our children are progressing or of the types of improvements that can and should be made.

Learning in the school years

While the performance of Canadian elementary and secondary schools on international tests in reading and math has been consistently high, other countries are making rapid advances, which could eventually weaken our competitive edge. Our performance in science is above average, but the number of university science graduates is below average, a fact that could limit advances in innovation, research and economic growth.

Post-secondary education

Increasing numbers of young people are attending post-secondary education (PSE), a development considered essential to building a skilled and adaptable workforce. Over the past 15 years, Canada's system of PSE has evolved considerably. However, we do not have a

comprehensive framework for accessing the quality of our PSE or for clarifying the various institutional categories and program options available to students. Consequently, students generally do not have sufficient information to make informed decisions about their educational paths.

Learning in the adult years

There is widespread agreement that adult education and training is essential. Adults need ongoing learning opportunities, both formal and informal, to help them remain competitive in an increasingly demanding workplace. Even for individuals past working age, continuous learning is essential as it may partially offset the effects of aging-related skills erosion and foster stronger health-literacy skills. However, rates of adult participation have stagnated and investments in work-related training are declining.

Although Canada has among the world's most-educated population, nearly half of adults in this country lack the prose-literacy skills needed to cope with the demands of a competitive global economy. Research shows that those who most need learning opportunities—such as work-related training—are, ironically, the least likely to obtain them. For many adults and their families, lack of education and training opportunities ultimately translate into low wages, unemployment, poverty and social exclusion.

Aboriginal Learning

Aboriginal Peoples in Canada have long advocated their own values, cultural traditions and ways of knowing. Their perspective on learning reflects an enduring philosophy and way of living that integrates all knowledge and experience throughout each stage of a person's life. Despite significant cultural and historical differences, Canada's First Nations, Inuit and Métis people share a vision of learning as a holistic, lifelong process.

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

Understanding Lifelong Learning: Transcending Trends

Most Canadians recognize the value of learning and education. According to the 2008 Survey of Canadian Attitudes toward Learning (SCAL), 96% of Canadians agree that learning is critical to success in life² and that fostering a love of learning is as important as teaching reading, writing and arithmetic.³ An overwhelming majority of Canadians agree that post-secondary education is of equal importance.⁴

Similar to many countries, however, Canada tends to equate the concept of lifelong learning with programs and policies aimed at upgrading the skills and knowledge of adults. While such efforts are necessary and commendable, they do not reflect the breadth and scope of learning as a lifelong process. In 1996 the OECD identified the four key features that characterize a comprehensive approach to lifelong learning, as follows:

- a systemic view in which all forms of learning are connected and cover the entire life cycle;
- a focus on the centrality of the learner, on meeting the needs of learners rather than on the supply side;
- recognition that motivation to learn is an essential foundation for learning throughout life; and
- an understanding that education policy has multiple objectives, including personal development, knowledge development, and economic, social and cultural objectives—all of which may change over the course of an individual's lifetime.

As noted in previous CCL reports, Canada's current approach to lifelong learning suffers from three fundamental weaknesses:

- a tendency to be supply-oriented, with objectives centred primarily on institutional mandates;
- lack of recognition of the integral role of life-wide learning from early childhood through the adult years, and the variety of experiences that span the full spectrum of formal and informal learning pathways that shape people's lives and;
- an absence of clear objectives, appropriate and responsive lifelong learning policies, as well as national data, measures and benchmarks.

The challenge of lifelong learning

"Lifelong learning does not mean 'recurrent' training but a constant relationship with education, starting with an emphasis on 'learning to learn'. And while formal education still represents the cornerstone of teaching, the less formal settings of the home, the workplace, the community and society are integral parts of the learning environment too, just as they are part of the foundations of economies and societies. Lifelong learning is already a reality in many OECD countries. The challenge is to find ways of extending it to all."⁵

– Donald Johnston, *Lifelong Learning for All*, OECD, 1998

CHAPTER 1: MEASURING LIFELONG LEARNING IN CANADA

While many countries around the world have rightly identified lifelong learning as a strategic priority, Canada was the first to develop a comprehensive measurement framework for gauging the extent of its population's progress in lifelong learning.

In 2006, CCL developed the Composite Learning Index (CLI), an annual measure of Canada's progress in lifelong learning—until the creation of the CLI, there was no means for measuring the lifelong learning performance of Canada and its communities.

The framework for the CLI is adapted from the “four pillars of education”, which is a conceptual model developed by Jacques Delors and outlined in a United Nations Educational, Scientific and Cultural Organization (UNESCO) report in 1996.

The Four Pillars of Learning

The four-pillar framework takes a holistic approach to lifelong learning. It embraces all aspects of learning that occur throughout the life cycle, which include the development of: general and applied skills and knowledge; social values and interpersonal skills; and personal qualities (mind, body, spirit). The four pillars are premised on the understanding that these skills, knowledge and attributes are acquired in various contexts, including at home, in the community, at school, and at work.

The four pillars include *Learning to Know*, *Learning to Do*, *Learning to Live Together*, and *Learning to Be*.

Learning to Know

The pillar Learning to Know refers to the development of skills and knowledge needed to function in the world. These skills are typically acquired through participation in formal education and include literacy, numeracy, critical thinking and general knowledge.

As the UNESCO Task Force on Education for the Twenty-first Century observed:

“This type of learning is concerned less with the acquisition of structured knowledge than with the mastery of learning tools. It may be regarded as both a means and an end of human existence. Looking at it as a means, people have to learn to understand the world around them, at least as much as is necessary for them to lead their lives with some dignity, develop their occupational skills and communicate with other people. Regarded as an end, it is underpinned by the pleasure that can be derived from understanding, knowledge and discovery.”⁶

Learning to Do

The pillar Learning to Do refers to the acquisition of applied skills, which includes computer training, managerial training and apprenticeships, and are often linked to occupational success.

Learning to Live Together

The pillar Learning to Live Together refers to the development of social skills and values such as respect and concern for others; of social and inter-personal skills; and of an appreciation of cultural diversity. These values and skills are fundamental building blocks of social cohesion, as they foster the bonds of mutual trust and support that strengthen communities and society as a whole.

Learning to Be

The pillar Learning to Be refers to learning that contributes to a person's body, mind and spirit. Skills in this area include creativity and personal discovery and can be acquired through reading, use of the internet and activities such as sports and the arts.

As the UNESCO Task Force on Education for the Twenty-first Century noted:

“In a highly unstable world where one of the main driving forces seems to be economic and social innovation, imagination and creativity must undoubtedly be accorded a special place. As the clearest expressions of human freedom, they may be threatened by the establishment of a certain degree of uniformity in individual behaviour. The twenty-first century will need a varied range of talents and personalities even more than exceptionally gifted individuals, who are equally essential in any society.”⁷

Understanding lifelong learning

“At the heart of such a [lifelong learning] society is the commitment to a set of values and to a system of education that affords all members the opportunity to stretch their minds to full capacity, from early childhood through adulthood, learning more as the world itself changes. Such a society... contributes to one’s career goals but also... to the general quality of one’s life. [Education extends] far beyond the traditional institutions of learning, our schools and colleges... into every place where the individual can develop and mature in work and life. In our view, formal schooling in youth is the essential foundation for learning throughout one’s life. But without life-long learning, one’s skills will become rapidly dated.”⁸

– National Commission on Excellence in Education, USA, 1983

The Composite Learning Index

The CLI generates numeric scores for 4,700 cities and communities across Canada and consists of 17 learning indicators organized across the four learning pillars. Each CLI indicator reflects an aspect of lifelong learning in Canada and was chosen because of its positive relationship to social and economic well-being. However, not all learning indicators are included within the index. The indicators used in the CLI are taken from several data sources and must meet the following criteria:

- relevant measures of lifelong learning
- reliable
- national in scope
- available at a regional level
- collected on a regular basis

In May 2010, CCL released its fifth year of CLI results, garnering increased international attention and interest.

In fact, CCL is supporting the development of a European version of the CLI, the European Lifelong Learning Indicators (ELLI), which is scheduled to be released later in 2010.

For more detailed information on the Composite Learning Index, visit CCL’s website at www.ccl-cca.ca.

How does the Composite Learning Index work?

A composite index is a measurement tool that combines a variety of figures and statistics to produce an overall score for a particular subject. Composite indices are used to track and analyze trends over time, or across different regions.

Well-known examples include the New York Stock Exchange’s NYSE composite indices, the Toronto Stock Exchange’s TSX composite indices and Statistics Canada’s Consumer Price Index (CPI). Nearly 100 years old, the CPI is a measure of the rate of price change for goods and services used by a typical Canadian household. Each month Statistics Canada compiles a virtual “basket” of about 60 goods and services, and then calculates a score that provides a richer understanding of the cost of living over time in Canada than, for example, a comparison of the price of bread or gasoline over time.

The Composite Learning Index also uses a basket of statistical indicators, each one chosen for its relationship to the state of lifelong learning in Canada. Examples of these indicators include high-school dropout rates, participation in job-related training, volunteering and access to broadband internet.

Just as with the Consumer Price Index, where the price of fuel (or electricity) to heat your home is given greater importance than the price of milk, not all of the CLI indicators have the same effect on the overall score. Each learning indicator has a different degree of importance to a community’s overall social and economic well-being, and the CLI is designed to reflect this. The index statistically determines this level of importance, rather than arbitrarily assigning values based on perceptions of importance.

By using an objective, statistical method, the CLI effectively and reliably connects the dots between a community’s learning conditions, on the one side, and its social and economic well-being, or outcomes, on the other. In fact, the Composite Learning Index has been assessed as “internally sound and robust” in a validation review conducted by the European Commission’s Joint Research Centre.

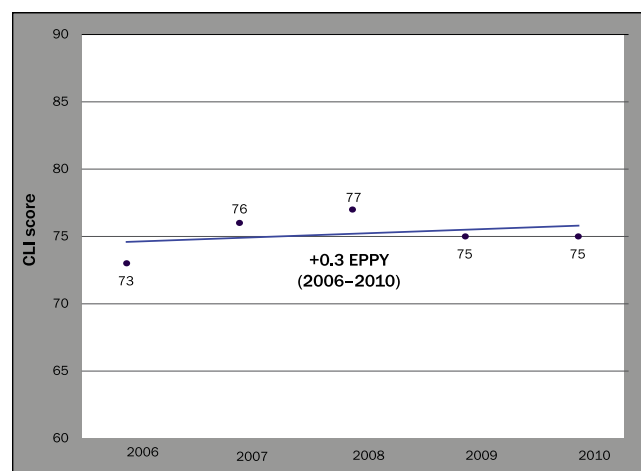
CLI scores show modest progress in lifelong learning

Over the past five years, Canada has witnessed no substantial progress in lifelong learning, from a CLI benchmark score of 73 in 2006 to 75 in 2010 (or +0.3 EPPY*). In addition, the 2010 CLI score of 75 shows no change since 2009. The +0.3 EPPY trend over the last five years was driven almost completely by consistent increases in the Learning to Do pillar.

Table 1.1: Canada CLI results and EPPY* trends, 2006–2010

Year	2010	2009	2008	2007	2006
CLI Score (5-Yr EPPY)	75 (+0.3)	75	77	76	73
Learning to KNOW	5.0 (0.0)	5.0	5.0	5.1	5.0
Learning to DO	6.1 (+0.3)	5.9	5.3	5.2	5.0
Learning to LIVE	4.7 (-0.1)	4.7	4.8	4.8	5.0
Learning to BE	5.0 (0.0)	5.0	5.6	5.4	5.0

Figure 1.1: CLI scores, Canada, 2006–2010



* EPPY = estimated points per year. This trend value is calculated using the CLI and pillar scores from the last five years.

Source: Canadian Council on Learning, *The 2010 Composite Learning Index: Five Years of Measuring Canada’s Progress in Lifelong Learning* (Ottawa: 2010).

Aboriginal Holistic Lifelong Learning Measurement Framework

CCL has worked with Aboriginal people in Canada to create a measurement framework especially designed to address the learning needs and aspirations of First Nations, Inuit and Métis people. Created in 2009 and the first of its kind in the world, the Holistic Lifelong Learning Measurement Framework provides a comprehensive approach to measuring Aboriginal learning across the life cycle.

The new framework reflects the underlying structures of the First Nations, Inuit and Métis Holistic Lifelong Learning Models that were first published in 2007 by CCL. These learning models were developed by Aboriginal learning experts across Canada, marking an essential first step toward the development of the present framework.

The first application of the Holistic Lifelong Learning Measurement Framework occurred in 2009 with the publication of CCL's report, *The State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success*. As the 2009 report demonstrates, the new framework conveys a more comprehensive and accurate understanding of the state of Aboriginal learning in Canada than has previously been possible, using a different set of indicators than employed in CCL's previous State of Learning reports.

Taken together, the indicators illustrate the full range of learning opportunities that occur across the life cycle and in a variety of settings (school, home, community, workplace and the land). Among them are community well-being indicators that reinforce the relevance of social and economic conditions on learning success—a necessary component when analyzing and interpreting learning outcomes for Aboriginal people.

Chapter 6 of this report, which provides highlights on the state of Aboriginal learning in Canada, describes the Holistic Lifelong Learning Measurement Framework in more detail. Further information on the Framework is also available at CCL's website at www.ccl-cca.ca.

Figure 1.2: Aboriginal Holistic Lifelong Learning Measurement Framework

		Domain	Indicator*	Measure*	
Sources and Domains of Knowledge	The Lifelong Learning Journey	Infants and Children (0–5)	Early childhood education (ECE)	Enrolment in ECE opportunities	Type of child-care arrangement used
				Availability of Aboriginal-specific ECE programs	Does child-care arrangement promote Aboriginal values?
			Early learning in the home	Reading to children	Proportion of children who read or were read to daily Proportion of children who hear stories daily
			Early developmental milestones	Level of school readiness	Proportion of children who are 'not ready' for school
		Youth (6–18)	Learning in school	Dropout rate	Proportion of incomplete high-school learning
				School attendance	Reasons for not finishing high school Degree of absenteeism from school
			Learning at home and in the community	Participation in extra-curricular activities	Participation in clubs or groups Participation in sports Participation in arts or music
				Community involvement	Youth volunteerism rates
		Young Adults (19–34)	Post-secondary education	Completion rates	Proportion who completed a university program Proportion who completed a college program Proportion who completed a trade or apprenticeship program
				Distance education	Proportion enrolled in distance education courses
			Learning at home and in the community	Broadband access	Proportion of First Nations communities with access to broadband services
Community involvement	Adult volunteerism rates				
Adults (35–64) and Elders (65+)	Learning at home and in the community	Internet usage	Use of internet		
	Workplace learning	Job-related training	Participation in job-related training		
	Literacy levels	Adult literacy levels	Level of prose literacy proficiency		

Source: Canadian Council on Learning, *The State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success* (Ottawa: 2009).

CHAPTER 2: EARLY CHILDHOOD EDUCATION AND LEARNING

Learning in the first five years of childhood has critical implications for well-being and later success in school, at work, and in the community—more so than learning in any other stage of life. It is a time when young learners develop attitudes about the value and purpose of learning, setting the stage for lifelong learning in all aspects of their lives. No other period in the life cycle has such far-reaching implications. Not surprisingly, investments in early childhood learning produce the highest social and economic returns.

Early childhood education and learning (ECEL) affects health, well-being and skill development, and lays a foundation for reading, writing, mathematics and science aptitudes over the long term.⁹

For the past 25 years in Canada, the number of children being cared for outside the home has been increasing steadily. The changing structure of the modern Canadian family, the lengthening of the average work day, and more women working outside the home have led to growing reliance on non-parental child-care arrangements, such as day care, nursery or preschool.

This chapter highlights the following indicators of early childhood education and learning:

- School Readiness
- Financing and Support of the Early Learning Environment
- Free play

School Readiness

Longitudinal studies from the United States, the United Kingdom and Canada have identified the skills and behaviours that, if present at school entry, lead to higher reading and math scores and better teacher ratings as children progress through school.¹⁰ The studies have suggested that the best predictors of later success are the early mastery of: math concepts, such as knowledge of numbers and order of numbers; language and reading skills, such as vocabulary, recognizing letters and phonetic comprehension; and attention-related skills.

Despite the well-known importance of early learning, many of Canada's children start behind—and stay behind—in school. Research indicates that 25% of Canadian children entering school lack the foundation needed for successful acquisition of literacy and numeracy skills. Research also suggests that one child in four enters school in Canada with learning or behavioural difficulties that could affect future success in school.¹¹

This lack of school readiness contributes to an enormous loss of human potential and to a high cost for the Canadian economy. It can also set in motion a lifelong chain reaction—leaving these children at greater risk of social and academic difficulties, of dropping out of high school, of subsequent decreased employability and earnings potential, and with an increased likelihood of poorer physical and mental health.¹²

According to CCL's 2006 Survey of Canadian Attitudes toward Learning (SCAL), 87% of Canadians agree that learning during the preschool years is critical to success in life.¹³ The 2006 SCAL also indicates that Canadian parents believe that early childhood learning should focus on attitudes—such as fostering a positive attitude toward learning—rather than on school readiness.¹⁴

Financing and Support of the Early Learning Environment

Societies, rich or poor, that invest in young children and their families have the most literate, numerate and healthy populations.¹⁵ Creating optimal conditions in a child's early years constitutes one of the best investments that a country can make if it is to compete in the global economy on the strength of its human capital.¹⁶

Despite several successful provincial models of early childhood learning, 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.¹⁷

The 2006 SCAL revealed that when it comes to public support for early childhood learning and development, there is a significant gap between parents' expectations and reality. The survey shows that nearly two-thirds of parents feel that local child-care services are under-funded, that resources are inadequate for parents who stay at home with their children, and that Canadians want more support for both options.¹⁸

Over the period 1998–1999 to 2006–2007, approximately half of children ages five and under were in some type of child-care arrangement such as day care, nursery or preschool (or care by a relative or other caregiver) while their parents were working or studying.¹⁹ However, data are not available that would indicate whether these arrangements met parents' needs for care and were of a quality considered commensurate with early childhood education.²⁰

Regardless of their type, child-care arrangements can provide children with opportunities to learn. Children thrive in environments that are stimulating and nurturing. Indeed, the importance of child-care quality is one of the most robust findings in developmental psychology.²¹ Higher-quality child care has been associated with children scoring higher on language and achievement tests, having better social skills, and displaying fewer behavioural problems.²²

Free play

Play nourishes every aspect of children's development—it forms the foundation of intellectual, social, physical and emotional skills necessary for success in school and in life. Play "paves the way for learning."²³ Play is so important that its significance in children's lives is recognized by the United Nations as a specific right in addition to, and distinct from, a child's right to recreation and leisure.²⁴

The physical and social environments in which Canadian children develop have changed over the past several decades. It is increasingly rare for children to have long, uninterrupted blocks of time to play indoors and outdoors, by themselves or with their friends. Growing numbers of children in Canada are spending substantial time in settings that focus on structured educational and recreational activities, leaving little time for participation in open-ended, self-initiated free play.²⁵

Canadian parents appear to recognize the fundamental importance of free play to young children's healthy physical, intellectual, emotional and social development. According to the 2008 SCAL, nearly all parents reported encouraging or allowing their two- to five-year-olds to engage in daily, unstructured play for periods of at least 30 minutes.²⁶

MOVING FORWARD IN EARLY CHILDHOOD EDUCATION AND LEARNING

- Develop common, shared, national indicators of progress. At present, there is no means to know how well our young children are progressing.
 - Set national goals/benchmarks/objectives, while ensuring provincial and regional determination of mode of service provision.
 - Provide more financial support for early childhood development and learning, flexibly deployed, to enable parents to select their preferred model.
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CHAPTER 3: LEARNING IN THE SCHOOL YEARS

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

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

Further, the pace of technological change is transforming the workplace and redefining the nature of work in our society. Skills such as decision-making, teamwork, leadership—along with cross-competencies such as communication skills, interpersonal skills and problem-solving—are increasingly required to be successful in school and in the workforce.

Recent studies suggest that students equipped with a range of skills make the most successful transitions to working life. This will be important as most of the jobs available to them will require some form of post-secondary education.

This chapter presents information on the following key areas of learning in the school years:

- Literacy Skills
- Performance in Science
- High-School Dropout Rates
 - The high cost of dropping out

Literacy Skills

Canadian youth need advanced literacy skills—including literacy in reading, math, problem-solving and science—to be successful in life. Literacy skills are critical indicators of the preparedness of young Canadians for the workplace and further education. 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 members of society, which benefits them and the communities in which they live.

According to the 2006 Program for International Student Assessment (PISA), 15-year-olds in Canada scored above OECD averages in all three literacy areas: reading, math and science.^{27*}

PISA 2006 marks the third international assessment of reading performance and the second assessment of math-literacy performance. Canada, like most OECD countries, showed stable reading scores between 2000 and 2006. Similarly, there was no significant change in Canada's math-literacy performance between 2003 and 2006.

Canada is doing better than most OECD countries in ensuring that students learn to read and write, regardless of their family's household income. Although socio-economic status remains a contributing factor to Canada's literacy rates, PISA scores show that income level has had less of an effect in Canada than in most other countries around the world.

* PISA 2006 represents the first full assessment of science literacy across the world.

Performance in Science

Why parents hire tutors

The 2007 SCAL asked parents about their reasons for hiring tutors for their children, including the possibility that they were dissatisfied with the quality of education provided by their children's schools.

SCAL data suggests that parents who had hired tutors were more likely to report that schools were falling below their expectations in a variety of areas, including teaching the basics and teaching students to love learning than parents who had not hired tutors.²⁸

Overall, 33% of parents reported hiring a private tutor to assist with their children's education. The survey showed that most tutors were hired to assist with mathematics, but were also hired to help with reading and writing, science and other subjects.²⁹

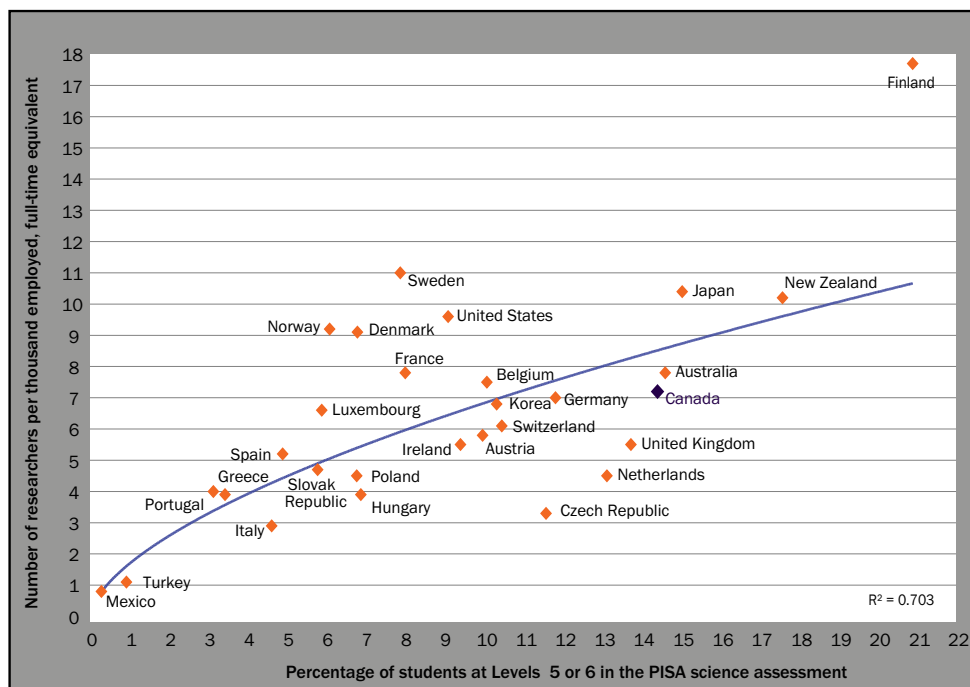
According to the OECD, in “an increasingly technology-based society, knowledge and skills in science are critical to economic progress.”³⁰ Science graduates provide “a principal source of innovation and growth”³¹ in the modern economy. Scientific research plays a key role in the health and well-being of all citizens.

Many jobs today require some type of scientific knowledge. There is a close relationship between the proportion of students who achieve high scores in science and the number of full-time equivalent researchers in a country.³² The number of scientists and engineers per capita has a significant, positive impact on productivity.³³

Interest in science is fostered during the elementary and secondary school years. Science courses offered during the formal years of education provide the technical competence and complex problem-solving skills required by a growing number of jobs today.

PISA scores show that Canada's performance in science during these years is above average. In Canada, 14% of students were top performers in science in 2006.³⁴

Figure 3.1: Top Performers in PISA science assessment and OECD countries' research intensity, 2006



Source: Organisation for Economic Co-operation and Development, *PISA 2006: Science Competencies for Tomorrow's World*, Volume 1 (Paris: 2007).

However, the number of university science graduates is below the OECD average, a fact that could limit advances in innovation, research and economic growth.

As the OECD notes, it is not possible to predict to what extent the performance of today's 15-year-olds in science will influence a country's future performance in research and innovation. However, research suggests there is a relationship between a country's proportion of 15-year-olds who were top performers in science (scoring at Levels 5 and 6 on the PISA science scale) and the current number of full-time equivalent researchers per thousand employed.³⁵

Although Canadian girls and boys performed equally well in science, gender differences were noted in two competency areas. The girls outperformed the boys in identifying scientific issues, while the boys outperformed the girls in explaining phenomena scientifically. This suggests that boys may master scientific knowledge better, while girls may see the larger picture better to identify scientific questions in a given situation.³⁶

Parents' views on homework

The 2007 SCAL revealed that most Canadians agree or strongly agree that homework enhances learning and helps students develop good work habits. However, more than 60% of Canadians also agreed or strongly agreed that, in their experience, homework had often been a source of household stress.³⁷ Indeed, the 2006 SCAL revealed that two-thirds of parents felt that they did not have enough knowledge to help with their children's homework.³⁸

The 2007 SCAL showed that nearly half of Canadians believe that both elementary and high-school students are assigned just enough homework. However, one-quarter of Canadians believe elementary students are assigned too much homework and 19% believe the same is true for high-school students.³⁹

The 2007 SCAL also showed that very few Canadians believe that parents spend too much time helping their children with homework. However, 37% believe that parents do not spend enough time helping their elementary school children with homework and 50% believe the same with respect to high-school students.⁴⁰

High-school Dropout Rates

Completing high school benefits the individual and the country as a whole. Research shows that high-school graduates are more employable, have a wider selection of jobs to choose from, and earn more money than those who leave school before obtaining their diploma. Studies also show that completing high school has potential health benefits. In general, high-school graduates make fewer visits to physicians and are more knowledgeable about what it takes to live a healthy lifestyle.

In contrast, non-completion of high school can limit individuals' employment and earning potential. The unemployment rate of those who have dropped out of high school is double that of other 20- to 24-year-olds. Earning potential is also more limited for those working in occupations with lower skill requirements.

Since the 1990–1991 school year, Canada's high-school dropout rate has decreased by almost half, falling from nearly 17% to 9% in 2008–2009.⁴¹

However, male high-school dropout rates are consistently higher than female high-school dropout rates. Between 1990 and 2008, 20- to 24-year old Canadian males had consistently higher dropout rates than females in the same age range. In the 1990–1991 school year, 19% of young males had not completed high school, compared with 14% of young females. In the 2008–2009 school year, the dropout rate for young men was 11% compared with 7% for women.⁴²

Learning to Know

Learning to Know involves the development of skills and knowledge needed to function in the world. These skills include literacy, numeracy, critical thinking and general knowledge.

How is Canada doing on Learning to Know?

In the last five years, there has been no significant improvement in literacy assessment scores for Canada's youth, high-school dropout rates or in the participation rates for post-secondary education. There has been consistent improvement in the proportion of university graduates across Canada.

The high cost of dropping out

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

High-school dropouts cost Canada's social-assistance programs and the criminal justice system more than \$1.3 billion annually.⁴³ The public cost of social assistance amounts to an annual average of \$4,000 for each person who drops out of high school, or a total of \$969 million. Costs to the criminal justice system amount to an average of \$220 per dropout—or a total of \$350 million a year.⁴⁴

Canadians who drop out of high school can expect to earn at least \$3,000 less per year than those who have graduated from high school but not continued on to post-secondary education.⁴⁵ As well, those who do not complete high school lose about \$8,000 a year due to illness and health-related expenses.⁴⁶

Parental expectations about school

According to the 2007 SCAL, most Canadians feel that elementary and secondary schools are generally meeting or exceeding their expectations. More than 60% of Canadians believe that our elementary and secondary schools are meeting or exceeding their expectations for teaching computer skills, reading, writing and math; and for preparing students for further education.⁴⁷

However, less than half (45%) of Canadians feel that our schools are meeting or exceeding their expectations with regard to preparing students for work.⁴⁸

Most Canadians (96%) agree that high-school programs that include work experience should be available to all students. However, of parent respondents whose children's schools do not offer such programs, only 36% indicated that they would encourage their children to participate if these programs were made available.⁴⁹

MOVING FORWARD IN THE SCHOOL YEARS

- Given current demographics, the school must become the hub for community learning for children and adults and for informal and non-formal learning opportunities.
- Canada should develop common learning outcomes, using carefully determined international criteria, for grades kindergarten through 12 and for all key subjects. This approach allows for harmonization. It is not about standardization or the creation of a national curriculum.
- The education of males represents a human capital dilemma. It must be tackled creatively and without fear of “political correctness” in the early years of schooling.

CHAPTER 4: POST-SECONDARY EDUCATION

The years of young adulthood, from 18 to 27 years of age, are a critical stage of learning and development. During this period, young adults gain greater independence from family and make the first major decisions of their adult lives, such as the pursuit of post-secondary education (PSE), participation in the labour market and personal lifestyle choices. Their decisions are influenced largely by a foundation laid during their years of compulsory education.

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

The economic and social benefits of pursuing post-secondary education have been widely documented. A skilled workforce is linked to higher productivity, innovation, economic growth, as well as to stronger communities with higher civic engagement and social cohesion. Individual benefits include better wages and job satisfaction, fewer periods of unemployment, and improved health and quality of life.

This chapter presents key information on post-secondary education in Canada, including:

- Financing and Support of PSE
- PSE Participation and Attainment
 - University enrolment and graduates
 - College enrolment and graduates
 - Registered apprenticeship training programs: registrations and completions
- Immigrants with Foreign Post-secondary Credentials
- Post-secondary Research and Development
 - Science and engineering graduates
 - Scientific publications
 - Support of research and development

Financing and Support of PSE

Federal, provincial, territorial and local governments all invest in public education with the understanding that it provides social and economic benefits and helps to ensure that there are qualified workers to meet the economic demand.

Balancing the distribution of PSE costs is a difficult undertaking. Governments must consider investments in public education against other important demands on their financial resources—such as health care, social welfare programs and infrastructure.

In 2004–2005, combined public and private expenditures on PSE in Canada totalled \$34 billion, equivalent to about three-quarters of expenditures on elementary and secondary education (\$48 billion).⁵⁰

According to the OECD, the proportion of private expenditures (which includes tuition fees) in Canada's colleges and universities was 47% in 2005, an increase from 39% in 2000. Canada's 53% share of public expenditures was well below the OECD average of 73% and the European Union average of 81%.^{51*}

PSE Participation and Attainment

Over the last 10 years in Canada, declines in the population younger than 15 years of age have coincided with increasing labour-market demand for post-secondary graduates. At the same time, an aging population means that Canada faces declines in the availability of experienced and knowledgeable workers in the labour force. These converging factors have made issues related to PSE access, participation and completion even more pertinent to Canada's future as a prosperous, vibrant and equitable democracy.

In 2009, the proportion of young adults participating in formal PSE rose to its highest point in Canadian history. Over the past 20 years the overall trend increased steadily, from 25% in 1990 to 37% in 2009.⁵²

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

Table 4.1: Combined public and private expenditures on education, by level of education, Canada, 1997–1998 to 2004–2005 (2001 constant dollars)

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

Notes:

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

^b Expenditures on private business colleges are not included.

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

^e Estimate

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

Several factors affect a young adult's decision about whether to pursue post-secondary studies, and whether he or she will complete their program of study. Research confirms that parental factors such as economic status, educational attainment, level of awareness of PSE options and costs, play key roles.⁵³ Young adults' academic performance and engagement in high school and in PSE, literacy skills, geographical location, gender, ethnicity, employment during PSE and after high school, and extracurricular activities are also factors that shape pathways to and through PSE.

Canada's PSE participation rates for youth rank very high when compared to rates in jurisdictions across the world. In 2005, 58.1% of Canadian youth aged 20 to 24 had already completed a post-secondary education or were attending some type of school. This placed Canada in third position, behind Poland and France, among the 24 countries for which data were presented.^{54*} Canada ranked second behind Ireland in the proportion of the population aged 20 to 24 that had already completed their education—and held 10th position in the proportion still in education.⁵⁵

University enrolment and graduates

According to Statistics Canada's Labour Force Survey (LFS), the proportion of working-age Canadians with a university education has steadily increased over the past 15 years.

In the 2007–2008 academic year there were more than 1 million (1,066,000) students enrolled in Canadian universities, an increase of 13.9% from 2002–2003. Of the university students enrolled in Canada, 812,700 were undergraduate students and 165,789 were graduate students—an increase of 13% and 23% respectively over 2002–2003 enrolment levels.⁵⁶

The increasing number of credentials granted by Canadian universities is commensurate with enrolment in these post-secondary institutions. The number of university graduates in Canada rose 43% between 1992 and 2007, from 169,000 in 1992 to 242,000 in 2007.⁵⁷

* International comparisons of participation rates in PSE need to account for the variance in educational structures and practices across countries. For example, youth in Canada attend and often complete PSE at earlier ages than in some European countries. In considering 20- to 24-year-olds, therefore, it is necessary to include those who have PSE education but are not currently attending school.

Exploring the gender gap in PSE

As the Canada Millennium Scholarship Foundation noted in 2007, “wider participation in post-secondary studies—whether offered by universities, colleges or trade schools—is essential to Canada’s ability to meet the twin challenges of a global knowledge economy and an aging population.”¹

Canada has a highly educated population. In 2006, 61% of the population aged 25 to 64 had completed a post-secondary education program, whether that means university, college or the trades. Of this group, 50% were females and 50% were males. Although PSE attainment appears evenly distributed among Canadian men and women, a more detailed examination suggests that the issue is more complex.

As CCL noted in its 2007 report *Post-secondary Education in Canada: Strategies for Success*, males are an under-represented group in university undergraduate programs. In 2006, for example, 58% of those aged 25 to 34 with an undergraduate degree were female, while 42% were male. Among those with college diplomas, more females had college diplomas (56%) than males (44%).²

According to Statistics Canada, in 2007 61% of all university graduates were female and 39% were males, a change from 1992, when 56% were female and 44% were males.³ University enrolment follow a similar pattern. Fewer men enrol in university than do women: In 2007–2008, 58% of all undergraduates were female while 42% were male.⁴

However, when considering enrolment in trades programs, in 2007 women represented about 1 in 10 apprentices.⁵ When women do enter the trades, they are more likely to enter soft trades, such as the food and service sector. Men tend to enter occupations such as building construction and metal working.⁶

To date, the consequences of the gender gap in post-secondary education have not been adequately assessed and may have implications over the long term. What, for example, will be the future impact of the under-representation of men at the university undergraduate level? Given the strong relationship between education and income, this under-representation may affect men’s earned income and the kind of professional learning opportunities offered to them.

¹ Joseph Berger, Anne Motte and Andrew Parkin, *The Price of Knowledge, Access and Student Finance in Canada* (Montreal: Millennium Scholarship Foundation, 2007).

² Statistics Canada, *2006 Census of the Population, Canada*.

³ Kathryn McMullen and Greg Parsons, “Trends in university graduation, 1992 to 2007,” *Education Matters: Insights on Education, Learning and Training in Canada* 6, no. 5 (Ottawa: Statistics Canada, Dec. 16, 2009), Catalogue no. 81-004-XIE.

⁴ Statistics Canada, “University enrolment,” *The Daily* (July 13, 2009), www.statcan.ca/english/dai-quo/.

⁵ Statistics Canada, “Registered apprenticeship training programs, 2007,” *The Daily* (June 25, 2009), www.statcan.ca/english/dai-quo/.

⁶ Statistics Canada, “Registered apprenticeship training programs, 2007,” *The Daily*.

Over the same period, the number of graduates with bachelor's or first-professional degrees increased 45%, while the number of graduates from master's and doctorate programs increased 79% and 54% respectively.⁵⁸

College enrolment and graduates

According to Statistics Canada, in the 2005–2006 academic year there were 531,972 full- and part-time students enrolled in certificate, diploma and degree programs at Canadian colleges.^{59, *, †}

Between 2000–2001 and 2005–2006, college enrolment in certificate, diploma and degree programs increased on average 0.7% per year.⁶⁰

During the 2004–2005 academic year, 161,300 students graduated from Canada's colleges, up from 138,063 in 2000–2001, for an average annual increase of 4%.^{61, 62}

Registered apprenticeship training programs: registrations and completions

The skilled trades are an integral part of Canada's economy. Apprenticeship training is a well-established approach to learning and involves alternating periods of in-class education and on-the-job training. Colleges deliver the classroom portion of training to students.

In 1991, the total number of registered apprentices in Canada was 192,945. However, following the economic downturn in the early 1990s, the number of registered apprentices had by 1995 declined to a low of 163,370. The total number of registered apprentices increased steadily between 1997 and 2007, with a record number of 358,555 registrations in 2007, over twice the number reported 12 years earlier.⁶³

Completions in apprenticeship training also followed a similar pattern—the number of apprenticeship completions in Canada experienced a decline during the mid-1990s and decreased from 19,725 in 1991 to 16,075 in 1996. However, recovery in the number of completions was relatively slow—the 1991 level of completions was not regained until 2005 (20,555 completions) and has increased since then to reach 24,495 in 2007.⁶⁴

Immigrants with Foreign Post-secondary Credentials

Nearly one out of five Canadian residents was born outside of Canada⁶⁵ and approximately two-thirds of Canada's population growth results from net international migration.⁶⁶

Canada's immigration policies include the awarding of points based on the applicant's level of educational attainment. These points for education have been adapted over the years to respond to labour-market needs for particular types of skilled workers.

In 2006, more than one in five university graduates living in Canada (21.5%) were immigrants with foreign credentials.⁶⁷ Data from Citizenship and Immigration Canada (CIC) show that 43% of immigrants who arrived in Canada in 2006 had completed a university degree prior to immigration, down slightly from the previous year (46%). This decline is accounted for by a decline of two percentage points between 2005 and 2006 in the number of immigrants accepted into Canada with a bachelor's degree.⁶⁸

About 12% of immigrants with a university education in 2006 were master's graduates and 2% had completed a doctorate.^{69, 70} As Statistics Canada reported in 2006, "although 23% of Canadians aged 25 to 64 were born outside Canada, they [immigrants] accounted for nearly one-half (49%) of the doctorate holders in Canada and for 40% of adults with a master's degree."⁷¹

Since 1996, the proportion of post-secondary graduates in the trades who immigrated to Canada dropped by half, from 10% to 5%. This reflects CIC's policy changes to the point-credit system. The last three years of available data indicate that the proportion of immigrants with college-level education has remained steady at 11%.⁷²

According to the 2006 Census, 7.2% of the trades population and 8.2% of the college-educated population were not born in Canada and did not earn their certificates or diplomas in Canada.⁷³

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

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

Post-secondary Research and Development

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

R&D in Canada—in such areas as science, engineering, the social sciences and the humanities—impacts on the economy and on our quality of life, and is of great import to both individuals and governments. Research and development at Canadian post-secondary institutions resolve industry challenges and help Canada's business sector remain innovative, productive and internationally competitive.

Science and engineering graduates

While the overall number of individuals with advanced degrees is an important general indicator, the number with advanced degrees in technical areas—such as science, technology, engineering and mathematics—is equally significant given R&D's critical role in driving innovation.

Between 1995 and 2005, Canada's share of master's degrees in engineering and computer science increased by 103%. While total doctoral degrees increased by 13%, doctoral degrees in engineering and computer science increased by only 1.2%.⁷⁴

Yet compared to other countries, there is cause for concern. Despite having the highest ranking in 2007 among OECD countries for the proportion (48%) of the population having completed college and university, Canada ranked 20th out of 29 OECD countries in the proportion of science and engineering degrees to all new university degrees in 2006 (18% compared to 37% for top ranked Korea). Canada ranked 18th in the proportion of PhD graduates in science and engineering to new doctoral degrees in 2006 (39% compared to 62% for top ranked Greece).⁷⁵

Scientific publications

Canadian researchers are highly productive contributors to scientific journals and are recognized internationally for their record in research and peer-reviewed publications. In 2003, Canada ranked eighth out of 30 countries in the number of articles published per one million population—well above the global rate per one million population, and the rates for the both the OECD and the EU.⁷⁶

However, Canada's production rate decreased by 5.7% between 1993 and 2003—Canada was one of only three countries to show a decline (United States at -4.3% and Czech Republic at -9.7%). Canada's international ranking in this area will not remain stable or improve if the production rate continues to decline.⁷⁷

Researchers from the United States, who produced 30.2% of the worldwide scientific articles in 2003, dominated the country distribution of production. Canada shared the sixth position with Italy, each country producing 3.5% of total scientific publications.⁷⁸

The relative prominence of cited scientific literature is the ratio of a country's share of literature cited by the rest of the work to its world share of scientific articles and reflects the number of times other researchers have referred to articles authored by scientific researchers from a certain country. It is an indication of the value placed on research by the international research community—the greater the number of citations, the greater the value of the research that is cited. In 2003, Canada ranked seventh in the relative prominence of citations in scientific literature, lower than that of the United States and the United Kingdom, but above the EU average (15th).⁷⁹

Support of research and development

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

Although the importance of R&D to innovation and improved productivity is well recognized, overall, Canada's total expenditures on research and development (as a percentage of GDP) were consistently below the OECD average despite significant gains over the last decade.

For 2007, Canada ranked 10th out of 24 OECD countries, at 1.9% of GDP. This compares with the average of 2.28% for all OECD countries. The 2007 data continue a 17-year trend, during which time Canada ranked below the OECD average for every year.⁸⁰ Canada's proportion of business enterprise expenditures (combined funding and activity expenditures) is low compared with that of other OECD countries, and is behind Canada's position in the overall rankings.⁸¹

More than 70% of funding expenditures for R&D activities performed by the higher education sector in 2007 originated from just two sources—the federal government (27%) and higher education institutions (46%).

Over the last decade, the federal government's contribution increased by about five percentage points. In contrast, the share of funding from higher-education institutions declined by about five percentage points.⁸²

Business enterprises and provincial governments have provided funding at levels relatively similar to that of private, non-profit organizations. Over the previous decade, these three sectors provided fairly stable funding for R&D activities taking place in higher education, accounting for 26% of total funding in 2007.⁸³

MOVING FORWARD IN POST-SECONDARY EDUCATION

Making the Sector More Intelligent: Convergence and Harmonization

A national post-secondary strategy should:

- Possess three essential characteristics: clearly stated objectives; measures to assess achievement of objectives; and a systematic goal of cohesion and coherence among all the facets—comparable to the PSE strategies formulated by the EU and other developed countries.
 - Emulate the EU's convergence of all forms of education and training across jurisdictions, thereby promoting mobility and quality. This implies harmonisation, rather than standardization, across jurisdictions.
 - Create systems of accountability through agreement on national indicators for success in PSE, learning from the experience of the EU, Australia and other political entities.
 - Create a pan-Canadian PSE data and information strategy which acts as the basis for indicator development and policy decisions.
 - Establish goals and measurable objectives for Canadian PSE for both the short and the long term.
 - Create and maintain a national forum on PSE that would include governments and NGOs and would have the following objectives: establish national goals, indicators, and data; and reach agreement on the mechanisms required to monitor and report annually to Canadians on progress.
 - Construct a pan-Canadian framework for quality assurance.
 - Establish a Canadian qualifications framework.
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CHAPTER 5: ADULT LEARNING

As this report demonstrates, the value and contribution of learning is evident at all stages of life, and learning in the adult years is no exception. Ongoing learning can influence income level, job satisfaction, political participation, and health and well-being. It also enhances Canada's economic productivity and competitiveness.

The Organisation for Economic Co-operation and Development (OECD) defines adult learning as all forms of education or training taken by adults (those aged 25 and over) for professional or personal reasons.⁸⁴ Adult learning can take many forms, including returning to formal education, and non-formal and informal learning activities. It can include job-related education and training, participation in community and civic activities, attendance at cultural events, exposure to the media, and learning through information and communication technologies (ICTs) such as the internet.

Adult learning can occur in many contexts, including in the home, at the workplace and in the community, and can be beneficial to adults of all levels of education and skills development. Through continuous learning, Canadians maintain the skills and knowledge needed to make informed decisions and lead successful lives as workers, citizens, and as members of families and communities.

This chapter highlights key indicators that reflect important aspects of adult learning, both formal and informal, and the varied contexts in which adult learning occurs. The indicators are:

- Literacy
 - Health literacy
- Job-Related education and training
- Volunteering

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.

Research shows that adults with low literacy suffer illness more often, experience more medication errors, have more workplace accidents, earn less, and are more likely to die at a younger age. Canada's social and economic well-being, health, and competitiveness are strongly linked to literacy.⁸⁵

The proportion of Canadian adults who lack the literacy skills needed to succeed in today's economy has remained unchanged over the past decade.

The 2003 International Adult Literacy and Skills Survey (IALSS) indicated that on the prose- and document-literacy scales, 42% of Canadian adults—about 9 million Canadians—performed below Level 3, the internationally accepted minimum considered necessary to succeed in today's economy and society.⁸⁶

The survey also indicated that nearly 3.1 million Canadians aged 16 to 65 were at proficiency Level 1 on the prose-literacy scale, and another 5.8 million were at Level 2.⁸⁷

However, the 2005 International Study of Reading Skills (ISRS), a follow-up to the IALSS, concluded that few people in Canada are at the low end of Level 1 in reading skills. The study found that a large proportion of adults in the lowest levels had low levels of education, a first language other than English or French, and earnings below \$25,000 per year.⁸⁸

Literacy projections for the period of 2001–2031, which take into account the impact of demographic shifts and population growth, suggest some disquieting trends:

- The proportion of adults with low literacy skills will remain virtually unchanged. As a result of population growth, Canada will have a 25% increase in the number of adults with low literacy skills from almost 12 million, to a total of more than 15 million adults.
- The number of senior citizens (aged 66 and over) with low literacy skills will double to more than 6.2 million.
- The number of immigrants with low-level literacy skills will increase by 61%, to a total of more than 5.7 million. However, those with higher literacy skills will more than double from 1.8 million to 3.7 million.
- The number of young adults (aged 16 to 25) with low literacy skills will remain almost the same.⁸⁹

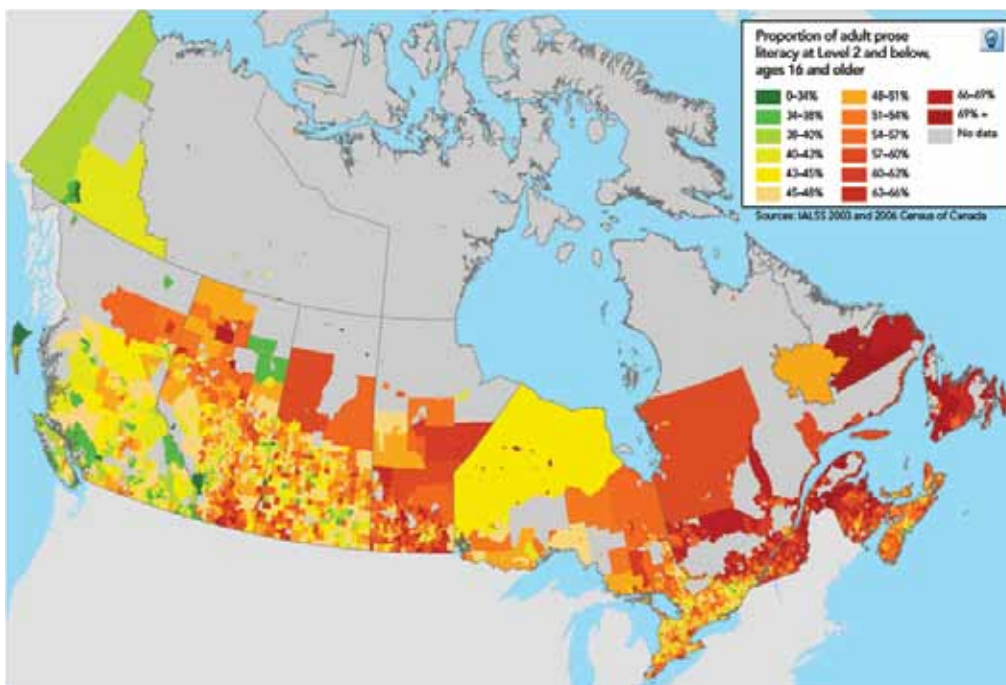
Health literacy

Health literacy is a composite of skills—dependent on, but different from—general literacy. This set of skills enables individuals to perform health-related tasks, such as reading nutrition labels, following medication directions or understanding safety instructions. To master health literacy, adults usually need, simultaneously, all three literacy skills: prose literacy, document literacy and numeracy.⁹⁰

However, more than half (55%) of Canadians aged 16 to 65 lack levels of health literacy required to read nutrition labels, follow medication directions, understand safety instructions or make informed choices for their own healthy living. More specifically, the 2008 Survey of Canadian Attitudes toward Learning (SCAL) shows that most Canadians (71%) can read directions and warnings on new medicines without difficulty, but fewer than half (46%) report reading nutritional labels without difficulty.⁹¹

Canadians with the lowest health-literacy skills are 2.5 times more likely to report being in fair or poor health than those with the highest skill levels. This is true even after correcting for factors such as age, education and gender.⁹² The three most vulnerable populations, in terms of health literacy, are seniors, immigrants and the unemployed.⁹³

Figure 5.1: Proportion of adults with low prose literacy (Level 2 and below), ages 16 and older, 2006



Source: Canadian Council on Learning (Ottawa: 2009), www.ccl-cca.ca.

Canadians consult a variety of sources to learn about health-related issues. The most popular sources of health-related information are: family doctors (73%); other health professionals (69%); friends or family (69%); and newspapers or magazines (64%).⁹⁴ Older Canadians are more likely to consult their family doctors for information, while younger Canadians are more likely to consult friends, family or the internet.

Strengthening the literacy skills of Canadians to the accepted minimum considered necessary (Level 3) to succeed in today's economy and society will play a key role in improving the health- literacy skills of Canadians.

Job-Related Education and Training

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

The 2006 SCAL indicated that Canadian adults' primary reason for taking work-related training is to enable them to perform more effectively in their current jobs, far more so than earning more money or finding a better job.⁹⁵ Canadians also reported that they are more likely to participate in work-related training if they enjoyed their initial experiences with schooling.

Continuous learning and training over the lifecourse are key contributors to economic growth and social well-being. Countries that recognize this are developing and implementing innovative strategies to increase and broaden the range of learning opportunities for their citizenry.

Yet according to a 2009 Conference Board of Canada report, companies in Canada spent an average of \$787 per employee on training, learning and development in 2008. In real dollar terms, this level of expenditure represents a 40% decline over the past decade-and-a-half.⁹⁶

Those who most need learning opportunities are, ironically, the least likely to obtain them. All of this is occurring against a backdrop that includes an aging workforce, pending skills shortages and an increasingly competitive and demanding workplace.

According to Statistics Canada's Access and Support to Education and Training Survey (ASETS),* 36% of working-age adults (aged 25 to 64 years) participated in job-related education or training† in 2008, an increase from 30% in 2002. This overall increase is attributable to the increased participation in job-related training—from 25% in 2002 to 31%. Participation in job-related education during the same period remained unchanged at 8%.⁹⁷

According to the 2007 SCAL, slightly more than half (51%) of non-retired Canadians reported taking formal work-related training (toward a degree, diploma or certificate related to a job/career) within the 12-month period prior to the survey. Of respondents who had not taken training within the past year, 60% reported that they would be more likely to participate if they could get paid time-off for work-related training, and 55% reported that they would be more likely to participate if they received financial assistance to pay for training costs.⁹⁸

Of particular concern is the fact that many Canadians (38%) have not participated in education and training activities in the last six years according to data collected over the period 2002–2008. Twice as many Canadians (67%) with less than high school were disengaged from education and training activities, compared to those with PSE (30%).⁹⁹

A 2009 study released by the European Commission compared adult participation in education and training across 18 countries, including Canada. It showed that on average, 36% of adults aged 25 to 64 years had participated in any type of education or training, whether for job-related reasons or for personal interest. In comparison, a higher proportion (43%) of Canadians aged 25 to 64 participated in any type of education or training.¹⁰⁰

* Statistics Canada's ASETS is a new survey that replaces three previously conducted surveys: Survey of Approaches to Educational Planning (SAEP), Post-secondary Education Participation Survey (PEPS) and Adult Education and Training Survey (AETS).

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

The same study showed that participation rates varied across the 18 countries, ranging from 9% in Hungary to 73% in Sweden. Canada ranked in sixth place (43%), behind Sweden (73%), Finland (55%), the United Kingdom (49%), Denmark (45%), and Slovakia (44%).¹⁰¹

Learning to Do

Learning to Do refers to the acquisition of applied skills that are often linked to occupational success, such as computer training, managerial training and apprenticeships.

How is Canada doing on Learning to Do?

Canada has seen an increase in the proportion of adults participating in job-related training over the last five years. At the same time there has been steady growth in the proportion of businesses offering workplace training. Canada, however, still lags behind other countries in offering and participating in work-related learning.

Volunteering

Volunteering fosters the sharing of information and knowledge among members of the same network or community, and can help to strengthen social connections. Research suggests there is a link between volunteerism and learning; that individuals who are more active in community organizations, as volunteers or as non-volunteers, are more likely to participate in adult learning.¹⁰²

According to a 2001 United Nations statement, volunteering allows “individuals [to] exercise their rights and responsibilities as members of communities, while learning and growing throughout their lives, realizing their full human potential.”¹⁰³

Results from the 2007 Canada Survey of Giving, Volunteering and Participating (CSGVP) demonstrate that almost 12.5 million Canadians (46% of the population aged 15 and older) volunteered during the one-year period preceding the survey. The rate of volunteering was largely unchanged from the 45% reported in 2004.

Figure 5.2: Proportion of Canadians aged 25 to 64 who participated in job-related education or training, 2002 and 2008

	Adult Education and Training Survey (2002)			Access and Support to Education and Training Survey (2008)		
	Education or training	Education percent	Training	Education or training	Education percent	Training
Total	30.1	8.2	24.6	36.0	8.1	30.6
Age group						
25 to 34	39.5	17.3	27.0	43.0	16.0	31.9
35 to 44	32.0	8.0	27.3	42.1	9.2	36.0
45 to 64	23.5	3.4	21.5	29.4	3.7	27.2
Sex						
Male	29.9	7.6	24.7	36.2	7.6	31.2
Female	30.2	8.9	24.5	25.9	8.7	30.1
Highest level of education attained						
Less than high school	8.0	2.1	6.5	14.3	2.6 ^a	11.7
High school diploma or its equivalent	24.1	7.1	18.8	24.9	4.9	20.9
Postsecondary education degree, diploma or certificate	39.4	10.6	32.7	44.2	10.4	37.8

Note:

^a use with caution

Sources: Valerie Peters, *Working and Training: First Results of the 2003 Adult Education and Training Survey* (Ottawa: Statistics Canada, 2004), Catalogue no. 81-595-MIE; and Tamara Knighton, Filsan Hujaleh, Joe Iacampo and Gugsu Werkneh, *Lifelong Learning Among Canadians Aged 18 to 64 Years: First Results of the 2008 Access and Support to Education and Training Survey (ASETS)* (Ottawa: Statistics Canada, 2009), Catalogue 81-595-M – no. 79.

However, the number of volunteers rose by 6%, partially because the population aged 15 and older had increased in size.^{104 *}

The CSGVP also showed that Canadians contributed close to 2.1 billion volunteer hours in 2007 (the equivalent of more than one million full-time jobs), a 4% increase in hours since 2004.

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

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

Learning to Live Together

Learning to Live Together involves developing values of respect and concern for others, fostering social and inter-personal skills, and an appreciation of the diversity of Canadians.

How is Canada doing on Learning to Live Together?

There has been no increase in volunteerism or the proportion of households participating in social clubs and organizations over the last five years. Over the same period, there has been a slight decrease in the proportion of Canadians who socialized with people from other cultures on a regular basis.

MOVING FORWARD IN ADULT LEARNING

Implement the recommendations of the 2002 OECD Report, *Thematic Review on Adult Learning, Canada*:

- set national benchmarks or targets for participation and outcomes as measured by rates of adult literacy and the acquisition of other essential skills;
- ensure appropriate levels of participation in adult learning;
- develop a coherent national system of Prior Learning and Recognition (PLAR);
- develop coherent and effective policies targeted to the specific learning needs of adults;
- improve the literacy levels of adults;
- enhance labour-market information;
- respond to groups with particular learning needs (working poor, Aboriginal people and immigrants);
- increase research efforts on the effectiveness of adult education; and
- develop a pan-Canadian forum on adult education.

Improve government support for skills development in the workplace in alignment with CCL's Five Key Principles:

- a comprehensive approach: a tool box or kit of validated and proven practices;
 - co-financing and co-responsibility;
 - a coalescence of partners;
 - a focus on demonstrating value for money and effort; and
 - validation/affirmation of individual achievement through certification and recognition.
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* The CSGVP defines volunteering as doing activities without pay on behalf of a group or an organization, and includes mandatory community service

CHAPTER 6: ABORIGINAL LEARNING

Understanding Aboriginal Learning

Aboriginal People in Canada have long advocated their own values, cultural traditions and ways of knowing. Their perspective on learning reflects an enduring philosophy and way of living that integrates all knowledge and experience throughout each stage of a person's life. Despite significant cultural and historical differences, Canada's First Nations, Inuit and Métis people share a vision of learning as a holistic, lifelong process.

Aboriginal learning is a highly social process that nurtures relationships within the family and throughout the community. These relationships have served to transmit social values and a sense of identity, which are integral to ensuring cultural continuity. As a result, the value of individual learning is considered inseparable from its contribution to the collective well-being of the community.

Success for Aboriginal People requires the recognition—and, more importantly, the restoration—of this vision of lifelong learning.¹⁰⁵

It also requires establishing a common, balanced understanding of what constitutes success in Aboriginal learning. Failure to do so can result in information that is irrelevant to Aboriginal communities and fails to inform effective social policy. The consequences of this conceptual disconnect can have harmful effects, leading to, for example, assessments of Aboriginal learning that focus exclusively on failure—when in reality, many successes may exist.

A New Approach to Measuring Aboriginal Learning

Over the past five years, CCL has worked closely with Aboriginal communities across Canada to develop a more comprehensive and accurate approach to measuring the learning success of First Nations, Inuit and Métis. Rather than rely solely upon traditional indicators and conventional measurement approaches, we chose instead to create a new measurement framework, one that would reflect an Aboriginal perspective on what constitutes learning success.

To achieve this objective, we embarked on a path of research and collaboration, and in doing so achieved the following goals:

- Identified what learning success means to Aboriginal people, through a review of research conducted over the past three decades.
- Established partnerships with National Aboriginal Organizations in Canada and worked with them to redefine how success is measured for First Nations, Inuit and Métis people.
- Worked with First Nations, Inuit and Métis learning experts across Canada to develop draft Holistic Lifelong Learning Models that reflect their respective perspectives on lifelong learning.
- Used the three Holistic Lifelong Learning Models to develop a Holistic Lifelong Learning Measurement Framework.
- Identified the indicators available to measure Aboriginal learning success through the first application of the new Measurement Framework.

The Holistic Lifelong Measurement Framework

The Holistic Lifelong Learning Measurement Framework is based on the underlying structure of the First Nations, Inuit and Métis Holistic Lifelong Learning Models that CCL first published in its 2007 report, *Redefining how Success is Measured in First Nations, Inuit and Métis Learning*.¹⁰⁶ The framework incorporates elements common to all three learning models, while acknowledging and integrating elements that are unique to the learning perspectives of First Nations, Inuit and Métis people.

The three main components of the Holistic Lifelong Learning Measurement Framework are: Sources and Domains of Knowledge, The Lifelong Learning Journey and Community Well-being. Each component of the framework includes a set of indicators that contribute to a more complete assessment of Aboriginal learning. Taken together, these indicators illustrate the full range of learning opportunities that occur across the life cycle (from infancy through to the senior years) and in a variety of settings (school, home, community, workplace and the land).

1. Sources and Domains of Knowledge—This includes the sources and domains from which an individual learns from and about: people (family, Elders, community), languages, traditions and ceremonies, spirituality, and the natural world. Western and Aboriginal knowledge and learning approaches also exist within this component.

2. The Lifelong Learning Journey—This includes a wide range of formal and informal learning opportunities that occur in a number of settings (in and out of the classroom) and throughout four life stages: Infants and Children (0–5), Youth (6–18), Young Adults (19–34), and Adults (35–64) and Elders (65+).

3. Community Well-being—This includes the social, physical, economic, spiritual, political and health conditions (such as income, employment opportunities, incidence of diabetes) that contribute to (or impede) learning success. This component depicts the individual and collective conditions that reflect an Aboriginal perspective on community well-being.

By broadening the conventional scope of inquiry to a more holistic one, the Holistic Lifelong Learning Measurement Framework provides Aboriginal communities across Canada with a comprehensive picture of both their learning strengths and challenges. It identifies what we do not know, highlighting the critical areas where current indicators do not exist, and serves a shared tool for monitoring progress in Aboriginal communities for future years.

Indeed, as this chapter indicates, the Holistic Lifelong Learning Measurement Framework enables a new narrative on Aboriginal learning to emerge, one that supersedes the all-too familiar and distressing storyline that centers on learning deficits and academic shortcomings among Aboriginal youth.

Key Findings

The first application of the new Measurement Framework was published in CCL's 2009 report, *The State of Aboriginal Learning in Canada: A Holistic Approach to Measuring Success*. The key findings of that report are organized to reflect the framework's underlying components and include information on a range of indicators.

This chapter highlights some of the findings from the 2009 report and includes the following key indicators:

- Sources and Domains of Knowledge
 - Participation in Cultural Ceremonies
 - Use of Traditional Skills
 - Family and Community Supports
 - Interaction with Elders
- The Lifelong Learning Journey
 - Early Childhood Education and Care
 - High-School Completion Rates
 - Post-Secondary Completion Rates
 - Participation in Extracurricular Activities
 - Volunteering in the Community
 - Volunteering in the Community
 - Access to Broadband Internet Services

Sources and Domains of Knowledge

Participation in Cultural Ceremonies

Aboriginal experiential learning, or learning by doing, is structured formally through regular community interactions such as ceremonies, sharing circles, meditation, or story telling, and daily activities. Participation in cultural ceremonies plays an important role in affirming Aboriginal people's cultural identity and knowledge of their heritage.

New information shows that more than one-quarter (28%) of all off-reserve Aboriginal children and 55% of Inuit children participated in, or attended, a cultural gathering, ceremony or activity, such as fiddling or drum-dancing.¹⁰⁷

Use of Traditional Skills

Learning from the land entails a significant amount of experiential learning through the use of traditional skills such as hunting, fishing or trapping. These activities represent an essential aspect of First Nations, Inuit and Métis learning.

Half (50%) of off-reserve Aboriginal adults took part in at least one these activities in 2006. The participation rates were even higher (68%) for Aboriginal people living in rural off-reserve communities and Inuit living in northern communities (86%).¹⁰⁸

Family and Community Supports

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

New information shows that an overwhelming majority (nearly 98%) of Aboriginal adults regularly received some form of support (personal or emotional) from individuals in their community in 2006. At the same time, more than two-thirds (68%) of Inuit adults reported strong or very strong familial ties.¹⁰⁹

Aboriginal children and youth reported that family provided the greatest support when it came to learning their ancestral language, as more than 41% of off-reserve Aboriginal children and 77% of Inuit children reported having someone in the community to help them understand their culture and history.¹¹⁰

Interaction with Elders

Elders play a central role in the promotion of lifelong learning for Aboriginal people. Elders teach about the importance of responsibility and relationships within the family and the community, all of which reinforces inter-generational connections and identities.

New information shows that in 2006 approximately four in 10 off-reserve Aboriginal youth interacted with Elders at least once a week (outside of school). Inuit youth reported the highest interaction with Elders (45%) followed by First Nations youth living off-reserve (40%) and Métis youth at 38%.¹¹¹

Learning to Be

Learning to Be refers to learning that contributes to a person's body, mind and spirit. Skills in this area include creativity and personal discovery and can be acquired through reading, use of the internet and activities such as sports and the arts.

How is Canada doing on Learning to Be?

Since the 2006 CLI, individuals have had variable levels of exposure to all types of informal learning across the many communities in Canada. Overall, however, attendance at museums, galleries and live performing arts has declined over the last five years. There has also been a considerable increase in exposure to and learning through the internet, with more Canadians using it for news and health information, e-learning and social networking.

The Lifelong Learning Journey

Early Childhood Education and Care

Recent research has shown that effective early childhood education programs can not only play an important role in preparing Aboriginal children for school, but can provide a solid foundation for their development throughout their lifespan.¹¹²

New information indicates that 50% of Aboriginal children living off-reserve in 2006¹¹³ and 44% of First Nations children living on-reserve,¹¹⁴ were receiving some kind of regular child care—compared with an estimated 51% of Canadian children.¹¹⁵

Among the off-reserve Aboriginal children who received child care in 2006, more than half (52%) attended a day-care centre or a preschool program while the remaining were at a home setting. Inuit children were the most likely to be cared for in a day-care centre or preschool program (62%),¹¹⁶ while First Nations children living on-reserve were the most likely to be cared for in a home setting (65%).¹¹⁷

Among off-reserve Aboriginal children receiving child care in 2006, 18% were in a setting that promoted First Nations, Inuit and Métis traditional and cultural values and customs. Inuit children (62%) were most likely to participate in Aboriginal-specific programs, followed by First Nations children living off-reserve (26%) and Métis children (15%).¹¹⁸

High-School Completion Rates

The familiar and concerning statistics of low high-school completion rates remain an important part of the picture of Aboriginal learning. In 2006, 40% of Aboriginal people aged 20 to 24 did not have a high-school diploma, compared to 13% among non-Aboriginal Canadians. The rate was even higher for First Nations living on reserve (61%) and for Inuit living in remote communities (68%).¹¹⁹ These numbers are distressing given the importance of a high-school diploma in the pursuit of further education, training and employment.

Post-Secondary Completion Rates

The statistics are more positive in post-secondary education (PSE), where a growing proportion of Aboriginal people are completing their credentials. In 2006, 41% of Aboriginal people aged 25 to 64 had completed a post-secondary certificate, diploma or a degree. Although this rate was lower than that of non-Aboriginal people (56%), Aboriginal people were on more equal footing when it came to rates of attainment at the college level (19% vs. 20%) and the trades (14% vs. 12%).

The wider discrepancy in PSE attainment is a direct result of differences in attainment at the university level, where only 8% of Aboriginal people had completed a degree compared to 23% of non-Aboriginal Canadians.¹²⁰

Participation in Extracurricular Activities

Informal learning and experiential learning—including participation in social, cultural and recreational activities—helps foster a desire to learn among Aboriginal youth while helping with the acquisition of new skills. Yet until recently, information on the state of Aboriginal people's informal learning has been limited.

New information reveals that in 2006, Aboriginal youth living off-reserve participated in extracurricular social activities at rates equal to or above Canadian youth.

Almost one in three (31%) Aboriginal youth reported participating in social clubs or groups on a regular basis and 37% in art or music activities—compared to 21% and 27% of Canadian youth, respectively.^{121, 122}

In 2006, a large majority of off-reserve Aboriginal youth (70%) actively participated in sports outside of school and at least once a week—similar to the finding of 71% of Canadian youth in a similar survey.^{123, 124}

Volunteering in the Community

Although research suggests that most adult learning is work-related, studies also indicate that much of adult learning occurs informally at home and in the community. Community involvement, through such activities as volunteering, contributes to social cohesion and serves to foster a strong sense of attachment to neighbourhoods and communities.

In 2006, one-third (34%) of Aboriginal youth and more than half (56%) of Aboriginal adults living off-reserve volunteered in their community on a regular basis; while 70% of First Nations adults living on a reserve volunteered within the last year.

Access to Broadband Internet Services

Increasingly, broadband internet services—including digital subscriber line (DSL), fixed wireless and cable—are becoming an essential part of the infrastructure that connects individuals, communities and organizations. It also plays a key role in cultivating lifelong learning by improving access to distance education and skills development.

Access to these services and learning opportunities are particularly important for Aboriginal people, many of whom live in small, remote communities across Canada. However, many Aboriginal people have limited broadband access. For example, First Nations people living on-reserve still rely primarily on slower dial-up internet service: according to Industry Canada only 17% of First Nations communities had access to broadband services in 2007 compared to 64% of other cities and small towns in Canada.¹²⁵

However, many Aboriginal people are pursuing distance learning when and where possible. In 2006, 18% of off-reserve Aboriginal adults were enrolled in a post-secondary course through distance education. Among this group, those living in rural communities (20%) and smaller towns and cities (20%) were more likely to participate in distance learning than Aboriginal people living in larger cities (17%).¹²⁶

Implications For Change

The Holistic Lifelong Learning Measurement Framework is grounded in an Aboriginal vision of learning and thus provides the basis for informed policy and program development—the very changes that are necessary to develop the full potential of First Nations, Inuit and Métis.

While the framework and its indicators present a more complete and balanced assessment of the state of Aboriginal learning in Canada—one that highlights many strengths—this does not necessarily mean that the learning conditions in all communities are acceptable. Rather these strengths represent the kind of critical building blocks that can contribute to future improvements.

As this report affirms, more needs to be done to improve the learning outcomes of Aboriginal people in Canada. CCL hopes that Aboriginal communities, governments and researchers will use the Holistic Lifelong Learning Measurement Framework to monitor and report on the learning of Aboriginal communities.

The framework has the potential to shift the current focus of policy and program development from one that reacts to learning deficits alone, to one that recognizes, builds upon and celebrates strengths. In this context, a shared appreciation for Aboriginal learning is possible, one that is holistic, lifelong, and of benefit to all.

For further information on the Holistic Lifelong Learning Models and the Holistic Lifelong Learning Measurement Framework, visit CCL's website at www.ccl-cca.ca

MOVING FORWARD IN ABORIGINAL LEARNING

- Need for a greater recognition of an Aboriginal vision of learning.
 - Need to use CCL's new Holistic Lifelong Learning Framework to:
 - Develop more informed solutions that recognise the diverse needs of Aboriginal communities.
 - Evaluate the success of policies and programs based on Aboriginal values and goals.
 - Shift the current focus of policy and program development from one that reacts to learning deficits alone, to one that recognises, builds upon and celebrates strengths.
 - Develop solutions that simultaneously address the social and economic conditions in Aboriginal communities that impact learning outcomes.
 - Assist in challenging the negative stereotypes related to Aboriginal learning in Canada.
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CHAPTER 7: OBSERVATIONS

Taking Stock of Lifelong Learning in Canada: Where Do We Stand?

Summing It Up

Over the past five years, the Canadian Council on Learning has demonstrated its commitment to monitoring Canada's progress in lifelong learning.

A critical aspect of monitoring and reporting is to reflect periodically upon, or “take stock” of, what we have learned. This process entails observation of any trends and emerging issues. It also entails developing, and calling for, appropriate responses that can advance Canada's progress in meaningful and effective ways. Simply maintaining the status quo in Canada will not enable us to sustain a competitive edge and ensure quality of life in the years to come.

What Have We Learned Since 2005?

On the surface, Canada is doing well as a society of lifelong learners. Compared to other countries, we have a high post-secondary attainment rate and our youth are performing well in international tests in math and science.

But a more detailed look indicates that there are many signs of emerging weakness that threaten our continued prosperity.

As this report describes:

- Canada does not have a lifelong learning system in place, nor a plan to transform the rhetoric of lifelong learning into a coherent vision and a plan for action.
- One-quarter (25%) of Canadian children entering school lack the foundation needed for successful acquisition of literacy and numeracy skills. As a proportion of GDP, Canada's public expenditures on early childhood services, including child care, are the lowest among 14 OECD countries. Canada lacks shared, national indicators of early childhood learning progress. At present, there is no way to know how well our children are faring.

- While our elementary and high-school students have consistently high scores on international tests in reading and math, other countries are making rapid advances. Further, our high international test scores in math, science and reading are not translating into high numbers of graduates in engineering and science.
- Canada ranks low among OECD countries in the number of graduates in science and engineering, key drivers of productivity. Canada ranked 20th out of 29 OECD countries for first degrees and 18th for PhD graduates in science and engineering.
- A large proportion (42%) of Canadian adults—about 9 million Canadians—have low levels of literacy; they perform below the internationally accepted minimum considered necessary for participation in a knowledge society. Literacy projections for 2001–2031 suggest little improvement.
- High-school dropouts cost Canada's social assistance programs and criminal justice system more than \$1.3 billion annually. Costs to the individual are significant—a high-school dropout can expect to earn at least \$3,000 less than those with a high-school diploma.
- Out of 30 OECD countries, Canada is the only country that does not have a formal PSE accreditation system of programs and post-secondary institutions. We lack an information framework that will enable us to measure or clearly demonstrate the quality of our PSE sector.
- Non-Aboriginal youth in Canada are three times more likely to complete a high-school diploma than Aboriginal youth, and almost five times more likely than Inuit and First Nations living on-reserve. Although the majority of Aboriginal students have aspirations to complete PSE, only 41% do so. Non-Aboriginal people in Canada are three times more likely to complete a university program than Aboriginal people.

Moving Forward: Addressing The Challenges

A country's commitment to lifelong learning will determine in large part its capacity to prosper and mature. An informed and engaged global citizenry is more able and willing to lead on the world stage, to confront critical issues of our time, such as global poverty, environmental degradation and conflict.

Countries around the world have recognized the potential of lifelong learning and are devising ambitious plans to implement it. The European Union's Lifelong Learning Program, designed with a focus on education and training, aims to make Europe "the most competitive and dynamic knowledge-based economy." The United Kingdom, Finland, the Netherlands, Sweden, Japan, Australia and other EU countries have initiated lifelong learning agendas, some with clearly articulated targets. The United Kingdom, for example, is implementing a plan to double literacy rates to more than 90% by the year 2020.

Canada's challenge is to focus collectively on creating a sustainable learning culture—on enabling and inspiring our entire citizenry to flourish in an increasingly complex and turbulent world.

As UNESCO's* International Commission for Education for the Twenty-first Century noted in 1996:

The concept of an education pursued throughout life, with all its advantages in terms of flexibility, diversity and availability at different times and in different places, should command wide support. There is a need to rethink and broaden the notion of lifelong education. Not only must it adapt to changes in the nature of work, but it must also constitute a continuous process of forming whole human beings—their knowledge and aptitudes, as well as the critical faculty and the ability to act. It should enable people to develop awareness of themselves and their environment and encourage them to play their social role at work and in the community.¹²⁷

Canada's Time Has Come

Canadians understand that increased education and skills translate into better wages, improved employment prospects, better health and enhanced quality of life. Research has shown that education and training have a demonstrable impact on productivity at both the individual and the national level. In particular, educational quality has been shown to have a significant impact on labour-market outcomes and per capita economic growth.¹²⁸

Yet despite widespread agreement on the importance of and need for skills, knowledge and education, Canada has yet to develop a comprehensive plan for fostering a learning society. The phrase lifelong learning continues to slip effortlessly into our discussions of education and learning. Rarely is it used with precision or translated into concrete action plans with clearly articulated objectives.

The creation of a society of lifelong learners is the responsibility of individuals and of society as a whole. A learning society is both a private and a public good. Success will largely depend on the extent to which society actively engages and makes demands on the skills and knowledge of all its citizens, promotes the use of individuals' competencies, and encourages individuals to think, act and be engaged.

To accomplish this objective requires commitment on the part of all Canadians to move from a state of complacency to a clear understanding of the economic and social challenges we face, now and in the future.

It requires a uniquely Canadian approach that reflects this country's blend of characteristics—our vast geography, culturally diverse population, high education attainment rate, and widely-diffused system of formal education.

Success will depend also on our willingness to act through the formulation of appropriate policies and programs that will move us forward. However, significant change will not occur unless we develop the appropriate tools, notably a comprehensive system of national measurements and goals. To be without them is to set conditions for failure.

* United Nations Educational, Scientific and Cultural Organization

A Final Comment

It must be said that *Taking Stock of Lifelong Learning in Canada (2005-2010): Progress or Complacency?* is intended to provide more than a summation of CCL's research. We believe that this report offers a unique opportunity to transform the rhetoric of lifelong learning into action that counts.

Other countries have already established ambitious lifelong learning policies and programs and are, brick by brick, building the foundation for a prosperous, secure, and democratic future. This report builds a solid case for why Canada can and must do the same, but in a manner that reflects the uniqueness of our country. Importantly, the report identifies future opportunities and suggests appropriate ways for moving forward.

CCL hopes that Canadians from all walks of life will read this report, recognize the relevance of its findings to their future and the future of their children, and demand of themselves and others a commitment to practical, concrete initiatives that will, at long last, create a lifelong learning society in Canada.

ENDNOTES

- 1 Teresa MacNeil, *Lifelong Learning as Public Policy in Canada* (Ottawa: Canadian Alliance of Education and Training Organizations, 2003).
- 2 Canadian Council on Learning, *2007 Survey of Canadian Attitudes toward Learning* (Ottawa: 2008), www.ccl-cca.ca (accessed March 9, 2010).
- 3 Canadian Council on Learning, *2006 Survey of Canadian Attitudes toward Learning* (Ottawa: 2006), www.ccl-cca.ca (accessed March 9, 2010).
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