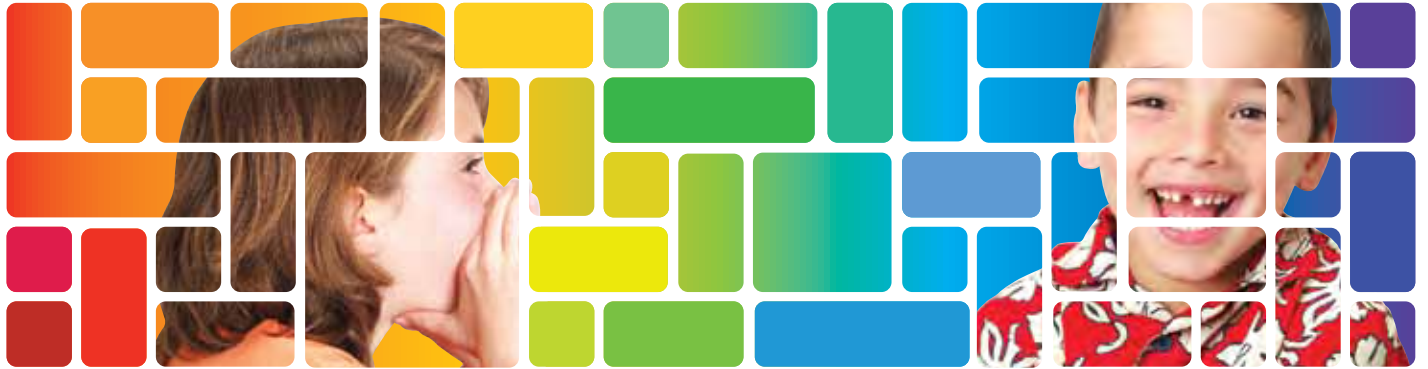


National Strategy for Early Literacy



Report and Recommendations

Prepared by

The Canadian Language and
Literacy Research Network

Réseau canadien de recherche
sur le langage et l'alphabetisation

Partager la science. Éveiller les esprits.



CANADIAN LANGUAGE &
LITERACY RESEARCH NETWORK

sharing the science. opening minds.

Acknowledgements

This project reflects the joint contributions of many dedicated individuals, including the authors of the policy research papers, the members of the panels at the eight NSEL Hearings, and those who made written or oral submissions to the Hearing process. This public consultation allowed direct exchange of knowledge and viewpoints among the research, policy, professional, and advocacy sectors.

National Advisory Committee: Kim Crockatt, *Executive Director, Nunavut Literacy Council*
Margaret Eaton, *President, ABC Canada*
Leona Gadsby, *Director of Community and Adult Literacy, 2010 Legacies Now*
Roby Hochman, *Vice President, Ontario Branch of the International Dyslexia Association*
D.G. Jamieson, *CEO and Scientific Director, CLLRNet (Chair)*
Robin McMillan, *Senior Consultant, Canadian Child Care Federation*
Penny Milton, *Chief Executive Officer, Canadian Education Association*
Sally Shearman, *Past President, Ontario Branch of the International Dyslexia Association*
Charles Ungerleider, *Director of Research and Knowledge Mobilization, CCL*
Doretta Wilson, *Executive Director, Society for Quality Education*

Past Members:

Daniel Buteau, *Coordinator Elementary Secondary Division, Council of Ministers of Education*
Margo Fauchon, *Fédération canadienne pour l'alphabétisation en français*
Peter Hicks, *Executive Director, Strategic Analysis, Audit and Evaluation Branch, HRSDC*
April Kalyniuk, *Chair of Member Council, Canadian Child Care Federation, Lord Roberts Preschool*

Project Staff: Jeren Balayeva, *Manager, Knowledge Group, CLLRNet (Project Coordinator)*
Robyn Goldberg, *Research Assistant, CLLRNet*
Stacey Greenberg, *Former Research Assistant, CLLRNet*
K. Chris Kirby, *Manager of Technical Services, CLLRNet*
Rachael Millard, *Research Assistant, CLLRNet*
Jackie Reid, *Research Assistant, CLLRNet*
Ann Marie Schenk, *Executive Assistant, CLLRNet*
Melanie Slade, *Former Communications Officer, CLLRNet*
Jennifer Starcok, *Managing Director, CLLRNet*

Design/Layout: Philip Wong, *Si Design Communication Inc.*

Copyeditor: Simone Graham, *Graham Communication Strategies*

Translator: All Languages Ltd.

© 2009 Canadian Language and Literacy Research Network

Report is available online at <http://docs.cllrnet.ca/NSEL/finalReport.pdf>

Réseau canadien de recherche
sur le langage et l'alphabétisation



CANADIAN LANGUAGE &
LITERACY RESEARCH NETWORK

Partager la science. Éveiller les esprits. sharing the science. opening minds.

Table of Contents

Executive Summary	5
Introduction	7
Why is this strategy needed?	7
Responsibility for programs impacting literacy development	8
National Strategy for Early Literacy Process	9
Concepts	11
Definitions of literacy.....	11
Measurement of literacy	11
Importance of early language and literacy environment	12
The early literacy challenge in Canada	13
Extent of low literacy in Canada	13
Impact of low literacy	14
Literacy drives economic growth	15
Literacy drives labour market outcomes.....	15
Literacy drives productivity growth and innovation in firms.....	15
Literacy increases the productivity of tax investments for health and education	15
Literacy enables participation in the democratic process and social engagement.....	16
Literacy will become more important in the future	16
Barriers to literacy development in Canada	17
Systemic barriers to successful literacy outcomes	17
Barriers for individuals	19
Interventions to improve literacy	23
Family literacy interventions.....	24
Interventions in early learning/child care settings.....	27
Classroom instruction and interventions	30
Community interventions	34
Clinical interventions	36
Conclusions	37
Recommendations	38
References	43
Appendices	49

Executive Summary

Literacy impacts all aspects of modern life. For individuals, it is the foundation for academic, financial, and life success; for nations, it is key to a healthy democracy and a flourishing economy. Adults with poor literacy skills are less successful in school, work less, and are unemployed longer. They require more social assistance and are more frequently in poorer health. Moreover, it is clear that the economic and social importance of literacy skills is increasing as our nation and workforce face increased global competition.

For these reasons, it is of particular concern that well-designed national studies (e.g., the International Adult Literacy and Skills Survey) have established that at least 42% of Canadian adults lack the literacy skills needed to succeed in Canada today. Moreover, repeated surveys have shown that these statistics have not improved for more than a decade.

Improving the literacy skills of Canadians is thus fundamental to numerous elements of public policy:

1. Literacy skills drive economic growth, labour market outcomes, productivity growth and innovation in firms.
2. Literacy increases the return on public investments in education and health.
3. Literacy is important for participation in the democratic process and for social engagement.

Improving the literacy skills of Canadians would carry extraordinary value. Studies by Statistics Canada, the University of Ottawa, and the Toronto Dominion Bank have calculated that reducing the percentage of Canadians who have low literacy skills by just 1% (from 42% of the population to 41%) would increase labour productivity by 2.5% and Canada's annual Gross Domestic Product (GDP) by 1.5% per person, leading to a permanent increase of \$18 billion/year in Canada's GDP.

Because the foundation for literacy skills is laid in childhood, and the benefits from improved literacy accrue over a lifetime, it is important to focus first on improving the literacy skills of Canada's children and youth. Experiences in the family, in early learning environments, and in the elementary school years have important consequences for children's long-term development. Unfortunately, while there is growing concern over the need to improve early literacy skills, and increase awareness of the costs associated with low literacy, Canada has lacked a strategy for action on this issue. This report reviews what can be – and is being – done to improve literacy skill outcomes for Canadian children and youth, from birth through age 16.

The present initiative to create a pan-Canadian *National Strategy for Early Literacy (NSEL)* has involved:

1. Determining what is known and not known about improving early literacy outcomes.
2. Preparing policy research papers to summarize the available evidence in key areas.
3. Conducting a national public consultation to obtain advice on what can and should be done to improve literacy outcomes. This step involved the solicitation of written briefs, followed by public hearings in eight major cities across Canada.
4. Synthesizing and evaluating submissions, policy research papers, presentations and discussion at public hearings, and other relevant materials, leading to the present document.

Through this process, a number of systemic and individual barriers to successful literacy outcomes for Canada's children and youth were identified. Important systemic barriers include:

1. The inability of many Canadian children to access high-quality early childhood education and care programs. Access tends to be a particular challenge for those children who are most vulnerable to poor literacy outcomes because they lack adequate supports through their home and neighbourhood environments.
2. The inability of many Canadian children to access libraries, and other supporting programs and services, again with access challenges increasing for many of the most vulnerable Canadian children.
3. The inability of many Canadian schools to identify and deal effectively with children who already lag behind their peers when they first enter school.
4. The need to improve teacher preparation in the area of reading development and reading instruction, and to improve the quality of literacy-related instruction in Canadian classrooms.

Fortunately, it is clear that most literacy challenges can be prevented through an appropriate mix of: 1) effective instruction; 2) early learning experience; 3) systematic assessments (to identify any children who experience difficulty at an early age); and 4) appropriate intervention. Many international and Canadian programs have been implemented in attempts to improve early literacy skills using various versions of this general approach. The most promising of these programs are reviewed in the body of the report. Unfortunately at this time, there is no coordinated effort to share knowledge about programs, implementations, and outcomes. As a result, programs developed or implemented in one part of the country are rarely shared with other Canadians.

Moreover, few initiatives to improve literacy outcomes for young Canadians have been subjected to rigorous evaluations to measure impact and benefits provided. As a result, we cannot be confident that Canada's return on our large public investments in this area produce the expected benefits, and we cannot identify which initiatives merit wider adoption and which require modification to improve their effectiveness. Canada thus requires a comprehensive approach to promote evaluation, networking, and sharing of knowledge across regions and sectors in the early literacy area.

The report concludes with specific recommendations regarding how current policies and practices can be modified to improve literacy outcomes, and how these can be monitored publicly. The four main general recommendations are:

1. To encourage and assist initiatives that facilitate children's language and literacy development from a very young age.
2. To ensure that appropriate teaching strategies, shown through rigorous, evidence-based research to be effective in developing strong literacy skills, are used in all Canadian classrooms.
3. To encourage community engagement and support for ongoing literacy development throughout the year.
4. To ensure that initiatives are systematically and rigorously evaluated and to improve communication and the sharing of literacy-related knowledge and resources.

Why is this strategy needed?

Literacy – the ability to gain and use information through the printed word – is essential for the economic, academic, and social success of individuals and societies. Yet more than seven million Canadian adults struggle with literacy problems. Statistics Canada reports that more than 42% of Canadians lack the basic literacy skills required to succeed in today's society (Statistics Canada & Organisation for Economic Co-Operation and Development [OECD], 2005).

Low literacy impacts all aspects of life: adults with poor literacy skills work less, are unemployed longer and more frequently, require more social assistance, and are in poorer health (Statistics Canada & OECD, 2005). They are also less socially engaged and more likely to be imprisoned than other Canadians (Correctional Service of Canada, 1998). It is increasingly recognized that literacy levels are impacting the success of public programs. As one example, consider health literacy – “the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course” (Rootman & Gordon-El-Bihbety, 2008, p. 11). The Public Health Agency of Canada (2009) recently reported that literacy is a significant driver of health outcomes, with an influence comparable to more familiar determinants such as tobacco use, diet, and socioeconomic status (SES). The Canadian Public Health Association provides specific examples of how low literacy impacts the health of so many Canadians (Rootman & Gordon-El-Bihbety, 2008); for example, this may include mothers not being able to make decisions in the best interests of their babies because they cannot understand labels or follow written health instructions accurately.

“Low literacy skills impede wealth creation, undermine competitiveness and create a significant cost burden on federal, provincial and municipal budgets.”

Maxwell & Teplova, 2008, p. 22

Low literacy therefore results in substantially lower returns on public investments in health care and education, higher costs for policing and the criminal justice system, as well as for welfare and employment supports, and reduced productivity. Improving the average literacy skills of Canadians has been identified as being the single greatest opportunity for achieving a high return on public investment (Alexander, 2007). In fact, reducing the percentage of Canadians who have low literacy skills by just 1% (from 42% of the population to 41%) would increase labour productivity by 2.5% and Canada's annual Gross Domestic Product (GDP) by 1.5% per person, leading to a permanent increase of \$18 billion/year in Canada's GDP (Coulombe, Tremblay, & Marchand, 2004). Importantly, the TD Bank Financial Group's report on the state of literacy in Canada specifically recommends investing in literacy early.

On a cost-benefit basis, the clear recommendation is to put the greatest weight behind youth literacy. The reason is that benefits accrue over a longer time span than for adults. Moreover, literacy appears to be a virtuous circle in skill development. Higher literacy promotes greater education that, in turn, lifts literacy and helps to develop skills. Starting this self-reinforcing cycle early leads to greater returns... On the cost side, age is not a barrier to improving literacy, but the cost of enhancing youth literacy might be lower, since many argue that children learn faster than adults. In economic terms, all of this is simply a way of saying that there are declining returns on investment in human capital with age. (Alexander, 2007, p. 15)

The foundation for literacy skill is laid in childhood, thus Canada's future competitiveness and success as a nation depends on the skills the children acquire. It is therefore critical that children are given quality experiences in their family, early learning environments, and elementary school years. Improving the literacy skills of young Canadians would have enormous long-term benefits for individuals as well as for Canada as a nation.

Responsibility for programs impacting literacy development

Canadian governments have recognized the importance of literacy in a variety of ways. While Canada's Constitution (specifically, Section 93 of the *British North America Act*, now known as the *Constitution Act, 1867*) assigns the power to make "Laws in relation to Education" to the provincial legislatures "exclusively", there is a wide-spread acknowledgement of a national interest in the provision of educational opportunities, and that the national government has a role to play in creating these opportunities. The Constitution is evolutionary, and there is an ever-stronger consensus that the Parliament and Government of Canada should, and must, help to make education – in the broadest sense – available to every citizen, no matter where he or she lives. Thus, a proper respect for Section 93 does not preclude a federal presence in educational matters.

This presence is expressed in two distinct but complementary ways. The most obvious, the oldest, and perhaps the best-known, are the programs that finance research. Through three national granting councils, the federal government has for many years provided peer-validated support to universities for scholars in the social sciences, science and engineering, and medicine. These programs have been broadened in recent years – significantly and importantly – to include grants for buildings and equipment, and for maintenance and operations. Student aid programs are another example of a legitimate, accepted, and even welcomed, federal presence in educational matters. They, too, have been expanded in recent years.

The national government has also come to play an ever-important role in ensuring that Canadian workers have the skills and the experience they need to function in a modern economy. There are myriad examples of training programs of one nature or another that have been or are being funded by the Government of Canada, either through the Employment Insurance Plan or through other federal programs.

In addition, a sizeable educational component is included in the financial resources that the federal government transfers to the provinces. These grants are unconditional, although the individual provinces must spend them within the broad areas specified by Parliament, which are: support for

children, post-secondary education, and social programs. In 2009-2010, the Canadian Social Transfer will provide \$1.133 billion in support for children, \$3.332 billion to post-secondary education and \$6.388 billion in social programs (Department of Finance Canada, 2009a). This differs from equalization payments, which are unrestricted and thus may be spent by the provinces as they see fit. Equalization payments address fiscal disparities among provinces by enabling less wealthy provincial governments to provide public services that are reasonably comparable to those in other provinces at reasonably comparable levels of taxation. In 2009-2010, six provinces (Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario and Manitoba) are to receive \$14.2 billion in equalization payments (Department of Finance Canada, 2009b).

In short, there is ample precedent for the use of federal money to obtain specific objectives, notwithstanding that those objectives may fall within the rubric of “education”.

In addition to these general considerations, in the area of literacy, federal support has for many years been concentrated on adult literacy and skill development, with little or no direct support provided in the area of early literacy. Neither the current Conservative government nor previous Liberal governments have taken substantial action to impact early literacy development. Moreover, at the provincial and territorial levels, the numerous child- and youth-focused initiatives have not been well coordinated, they appear to have lacked a strong evidence base, and to date, they have not resulted in broad improvement in literacy outcomes.

Fortunately, much is known about how to ensure that children and youth acquire strong literacy skills. This knowledge needs to be applied broadly and systematically across Canada. Until this happens, too many Canadian children will fail to achieve the essential literacy skills. The costs and consequences of this pattern of underperformance – to individuals and to Canada – are so enormous, that it cannot be permitted to continue. Canada needs a National Strategy to raise the literacy level of our population, for the benefit of all.

National Strategy for Early Literacy process

To facilitate the creation of a pan-Canadian consensus on what should be Canada’s targets for literacy achievement, and on the actions needed to achieve these targets, a range of education, literacy and public interest organizations came together to lead the *National Strategy for Early Literacy (NSEL)* initiative.

Two main questions were posed:

1. What can be achieved in terms of the literacy skills of Canadian children and youth?
2. What needs to be done to optimize these skills?

The NSEL initiative built on the expertise and administrative resources of the Canadian Language and Literacy Research Network (CLLRNet). The initiative drew upon the knowledge and experience of policymakers, practitioners, and researchers and was guided by a National Advisory Committee, with representatives from the various sectors that have major influence over policies and practices that relate to language and literacy development.

This group identified the knowledge required to formulate a successful strategy and determined the existing knowledge gaps. To begin to address these knowledge gaps, CLLRNet commissioned a series of 15 policy research papers, with financial support provided by major partners. These policy research papers were written by leading Canadian literacy experts who summarized the evidence base needed for informed policy recommendations. The policy research papers are publicly available at <http://nsei.cllrnet.ca/category/full-paper-available/>.

Subsequently, CLLRNet organized a nationwide public consultation through public hearings in eight major cities to solicit advice on what could and should be done to improve literacy outcomes and the implications for programs and policies. To participate in the process, interested parties (e.g., literacy groups, libraries, school boards, etc.) submitted information briefs that included recommendations for the strategy – most of these were heard during oral presentations, while other positions were considered based on the written briefs. The consultation component was essential for the success of the strategy. It provided an opportunity for direct exchange of knowledge and views among the research, policy, professional, and advocacy sectors. The transparency of the hearing process was increased through the NSEL blog (<http://blogs.cllrnet.ca/nsei/>), making it possible for all to view and comment upon the presentations and discussion that took place at each of the hearings.

The information collected through these phases of research, review, and public consultation was synthesized and organized into this report, summarizing what is known about policies and practices, beginning at birth and continuing through age 16, that contribute to the best possible literacy skill outcomes for Canadian youth. This report summarizes the key findings from this process, concluding with specific recommendations regarding how current policies and practices can be modified to improve literacy outcomes, and how these can be monitored publicly.

Definitions of literacy

In the traditional sense, “literacy” is the ability to read, write, and perform simple numeric calculations. In a broader sense, it includes multiple literacies required to succeed in a knowledge economy.

Many different definitions of literacy were offered in the course of the NSEL process. One example is health literacy – “the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life-course” (Rootman & Gordon-El-Bihbety, 2008, p. 11). The levels of health literacy vary across different population groups, with the most vulnerable groups being seniors, recent immigrants, individuals with lower levels of education and with low French or English language skills, as well as people receiving social assistance. These groups are more likely to experience negative health outcomes because of low health literacy skills (Rootman & Gordon-El-Bihbety, 2008).

During public hearings, family literacy was defined as the ability to achieve one’s goals and develop one’s knowledge and potential. Other definitions of literacy included not only reading and writing, but also speaking, viewing, and representing, as well as what these mean to various social and cultural groups. Included were, “the ability to read and write, but also to communicate thoughts and ideas in effective ways. We want to enable individuals to think critically, to solve problems, to develop knowledge, and essentially to be able to participate fully in society” (Tams, 2009).

These broad definitions expand on the definition of literacy that is used in the major international surveys of literacy skills (e.g., the International Adult Literacy and Skills Survey and the Adult Literacy and Life Skills Survey) conducted by the Organisation for Economic Cooperation and Development (OECD) and Statistics Canada. For these surveys, literacy is defined as: “the ability to understand and employ printed information in daily activities at home, at work and in the community – to achieve one’s goals and to develop one’s knowledge and potential” (OECD & Human Resources and Skills Development Canada [HRSDC], 1997).

The population-level studies of the literacy skills of Canadians are based on the OECD definition of literacy. These studies demonstrate that more than 42% of Canadians lack the basic literacy skills required to succeed in today’s society (Statistics Canada & OECD, 2005). Because literacy, as defined by the OECD, provides the foundation for the more expansive descriptions proposed by others, adoption of any of these broader alternative definitions would increase the estimated number of Canadians who lack adequate literacy skills.

Measurement of literacy

A variety of instruments are available and have been applied to measure the literacy skills of Canadians. For international and pan-Canadian surveys, the International Adult Literacy and Skills Survey (IALSS) was designed as a vehicle to directly measure the functional literacy skills of adults across different countries. Similarly, the Program for International Student Assessment (PISA) is a system of international and pan-Canadian assessment focused on 15-year-olds’ abilities in reading

literacy, mathematics literacy, and science literacy. Results from such surveys are consistent in finding that a high proportion of Canadians (typically around 40%) lack appropriate literacy skills and that there is significant variation in literacy skill across Canada (Statistics Canada & OECD, 2005).

Several Canadian Ministries of Education have implemented system-wide measurement protocols to assess the reading, writing, and mathematics skills of students in elementary and secondary schools. For example, Ontario's Educational Quality Assurance Office (EQAO) measures reading, writing, and mathematics literacy for all children in Grades 3 and 6. Such surveys show that a high proportion of Canadian children – approximately 30% of Grade 3 and Grade 6 students in Ontario – lack the expected literacy skills, even at this early stage (EQAO, 2008).

Assessment of children prior to and at school entry is becoming more common. One of the most common reasons for assessment is to screen for children at risk for reading difficulties (Desrochers & Glickman, 2008). These approaches demonstrate that too many Canadian children are receiving a poor start. For example, the Ontario Ministry of Child and Youth Services (2007) found that by four and five years of age, approximately one-fifth of all children show delays in vocabulary development.

Two measurement/screening approaches that were developed and have been adopted quite widely in Canada provide general guidance regarding the development of young children. The first of these is the Early Development Instrument (EDI; <http://www.offordcentre.com/readiness/index.html>), which assesses the general development of children across five domains around the time they enter Kindergarten. The EDI is currently used in several provinces, including British Columbia, Ontario, and Manitoba. This instrument is used as a population-based measure to examine the development of groups of children; it is not intended for the assessment of individual children. One application of the EDI is the study of the geographic distribution of at-risk children, coordinated with population-level information to improve outcomes (Lapointe, Ford, & Zumbo, 2007).

The second instrument, the Early Years Evaluation (EYE; <https://www.ksiresearch.com/eye/index.php>) was designed to assess the development of individual children, aged 3 to 6, across five domains. The EYE has been implemented province-wide in New Brunswick and Prince Edward Island, as well as in some schools in Alberta and Saskatchewan. In addition, three international pilot projects are currently being implemented in Trinidad and Tobago, Dominican Republic and Jordan. Learning to read is identified as a particular focus for the EYE, and it is intended that test results will be used to guide interventions and supports for individual children by parents and educators.

Importance of early language and literacy environment

The first three years of a child's life have enormous impact on the development of basic language and cognitive skills and lay the foundation for early literacy development. In fact, the influence of a child's home language environment can be observed within the first few months after birth. The language and literacy environment of the child's home and early learning and child care (ELCC) settings are therefore strong determinants of early language and literacy skills. As parents are their children's first teachers, they need to be aware of the importance of creating a language- and literacy-rich environment in the home. ELCC teachers also need to create programs to help children develop their language and emergent literacy skills.

Extent of low literacy in Canada

About a decade ago, Canada and other countries in the OECD began to collaborate on a program to measure literacy skills in their populations, and to share their results in order to allow international comparisons. These initiatives were developed to provide a benchmark against which to measure our performance, and they have demonstrated just how many Canadians are unprepared for the literacy demands of modern society (Jamieson, 2006).

The international tests summarize literacy skill in terms of five categories. Level 5, which indicates the highest level of skill, is attained by individuals who demonstrate command of higher-order information processing skills. Level 3 denotes the skill level typically required for successful high school completion and college entry in Canada. Scores at or below Level 2 are considered inadequate for full participation in society (Statistics Canada & OECD, 2005).

To illustrate, a person at Level 1 would typically be unable to determine the amount of medicine to administer to a child based on simple instructions printed on a bottle. Those at Level 2 can understand simple materials only. Because these individuals frequently develop coping skills which mask their difficulty and allow them to deal with everyday literacy demands, they (and others) may overestimate their proficiency, though they have difficulty in novel situations, such as when learning new job skills (Statistics Canada & OECD, 2005).

Astonishingly, the estimates – over a range of tests and testing programs – reveal that about 42% of Canadians between the ages of 16-65 fail to achieve Level 3 proficiency. Moreover, only 14% of Canadians demonstrate skills at the high end of the scale – Level 4 and 5, representing critical, analytical, and evaluative readers. Unless the situation can be remedied, the consequences – for individuals with poor literacy skills and for other Canadians – are daunting. Unfortunately, Canada's results have shown little improvement from the first findings in 1994 to the most recent in 2003 (Statistics Canada & OECD, 2005; Statistics Canada & HRSDC, 2005).

While the national and international literacy surveys have focused on adults and older youth, it is clear that reading and writing difficulties begin early in life (Stanovich, 1986). Approximately one in three Canadian 15-year-olds performs at or below Level 2 (Willms, 2004a).

Some in the literacy field have suggested that these results need not cause alarm. This view focuses on the observation that the international literacy surveys show that Canadians tend to demonstrate higher levels of literacy skill than those in most other OECD countries (Purcell-Gates, 2009). Proponents of this view may or may not acknowledge that specific populations in Canada face literacy challenges.

Others emphasize the substantial proportion of Canadians who fail to acquire adequate literacy skills. For example, 20-40% of the current cohort of Canadian students failed to meet the performance standard for literacy skills necessary to compete in a global economy (McCracken & Murray, 2009). Low literacy is more prevalent in certain vulnerable populations, including: Aboriginal children (Statistics Canada & HRSDC, 2005); English as a second language/French as a second language (ESL/FSL) learners (Geva, Gottardo, Farnia, & Byrd Clark, 2009); children from low

SES homes (Maxwell & Teplova, 2008); and children with special needs (Lavin, 2009). On average, literacy achievement is lower for rural students than for their urban counterparts (Canadian Council on Learning [CCL], 2008). Thus, parents in rural areas tend to have weaker literacy skills than those in urban areas. Parents with weak literacy skills can unintentionally sponsor home conditions that hinder children's literacy development, and data suggest that there is indeed a weaker orientation towards literacy in rural homes (CCL, 2008).

“Closing the rural/urban gap requires efforts on several fronts: to help rural families provide rich literacy experiences for their children; to help rural students see the value of education and strong literacy skills; and to help rural schools meet higher standards of excellence.”

CCL, 2008, p. 29

Impact of low literacy

Literacy is foundational. Within individual sectors of Canadian society, this fact is coming to be appreciated. For instance, within the health system, it is increasingly understood that literacy skills have a substantial influence on health outcomes (Rootman & Gordon-El-Bihbety, 2008). Health problems diminish markedly across populations as literacy levels increase (Roberts, 2009). Accordingly, literacy needs to be a major concern to health planners as a mediator of population health. Health status, SES, and literacy are strongly interconnected and interrelated. In every population, there is a health gradient where health status improves steadily as SES moves from the lowest to the highest levels of education, employment and income. “Socioeconomic status and literacy go hand in hand across the life cycle” (Roberts, 2009). This includes the influence of family literacy on children's early brain development and learning, which sets the stage for future coping skills and biological responses to stress. Literacy also influences readiness for learning in school and progression through higher grades, which ultimately influences the amount of educational attainment and lifetime employment and income.

The critical importance of literacy is similarly becoming recognized in other public policy domains. For example, it is becoming widely appreciated that many of those who come into contact with the criminal justice system have low levels of literacy. The relationship of literacy to educational outcomes, economic outcomes and the requirements for social supports is apparent as well. This growing recognition is only a beginning: Canadians need to care much more about low literacy, for several reasons.

Literacy drives economic growth

Differences in average adult literacy levels exert a profound influence on key indicators of economic success, explaining as much as 55% of the differences in the long-term growth rate of GDP per capita and productivity growth at the national and international level (Coulombe, Tremblay, & Marchand, 2004; Coulombe & Tremblay, 2006). The distribution of adult literacy skill influences the long-term economic success of nations; specifically, higher proportions of adults with low literacy skills result in lower overall rates of long term GDP growth. Canadian jobs that require low skills are disappearing, and in the absence of additional investment to improve literacy skills, the number of low-skilled adults will remain unchanged. According to one recent estimate, by 2016, there will be very limited economic demand for the 48% of Ontario adults who have low-level skills (McCracken & Murray, 2009).

Improving literacy levels in a country can have a significant impact: a 1% increment in the average literacy score is associated with a 2.5% increase in labour productivity and a 1.5% overall increase in per capita GDP. Based on these findings, increasing the proportion of Canadians who achieve Level 3 literacy by just 1% would result in a permanent, \$18 billion/year increase in Canadian GDP (Coulombe, Tremblay, & Marchand, 2004). In addition, raising individuals from Level 1 and 2 to Level 3 literacy would create an extra \$11 billion in tax revenue each year. It would also save \$5 billion per year in employment insurance and social assistance (Murray et al., 2009).

Literacy drives labour market outcomes

Differences in literacy skill are associated with a large variance in employability, wage rates, income and reliance on social assistance as well as other transfers. Adults with higher literacy skills work more, earn more, spend less time unemployed and rely less on government transfers (Statistics Canada & OECD, 2005). More than 40% of Canadians who score at Level 1 are unemployed, and more than half of those Canadians who are unemployed at any given time score lower than Level 3.

Literacy drives productivity growth and innovation in firms

Literacy facilitates effective communication, increases overall productivity, and influences the acquisition and application of information and communication technologies in daily life, including the workplace. Higher levels of literacy increase employee retention and reduce the incidence and severity of workplace illness and accident. Cisco, one of the world's technology leaders, suggests that communication skills – specifically language and literacy skills – will be the primary determinant of both productivity growth and competitive advantage in the coming decades (Johnson, Manyika, & Yee, 2005).

Literacy increases the productivity of tax investments for health and education

Higher literacy levels reduce the cost of delivering health and education, and increase returns on public investments in these areas. Literacy skills have a profound influence on educational success – impacting the probability of high school completion, the probability of post-secondary participation, the level of post-secondary participation, and the level and intensity of participation in formal adult education and training (Willms, 2004b). Literacy is linked to individual health outcomes, including the probability of experiencing illness, the length of recovery, the cost of treatment and the age at death. Individuals with low literacy skill become ill more often, experience more workplace illnesses and accidents, take longer to recover, experience more misuses of medications, and die younger (Federal Provincial and Territorial Advisory Committee on Population Health, 1999).

Literacy enables participation in the democratic process and social engagement

Adults with lower literacy skill levels participate less in community activities, volunteer less and are less likely to vote (Statistics Canada & OECD, 2005).

Literacy will become more important in the future

Through massive educational investments, Canada's competitors are rapidly improving the literacy skills of their current and future workers. These more skilled workforces will increasingly allow firms in the developing world to compete on quality as well as price, placing intense price pressures on Canadian firms and increasing incentives to move production to lower cost countries. Markets for goods and services are increasingly global, offering huge opportunities and economies of scale to those firms able to compete. Markets for key inputs – financial capital, technology and high-end human capital – are also global, effectively increasing the relative importance of the skills of the workforce for both competitiveness and public policy. Confronted with rapidly rising competition, Canadian firms have few options. To remain competitive, these firms must adopt more efficient work organizations and technologies. By definition, these work organizations are more knowledge- and information-intense and, thus, demand workers with much higher levels of essential skills, most notably higher literacy levels (McCracken & Murray, 2009).

For all of these reasons, literacy development can be seen as not simply an issue, but as a strategy for addressing other issues and for building the future of Canada.

Systemic barriers to successful literacy outcomes

A number of systemic barriers reduce opportunities for young Canadians to acquire strong literacy skills. One key systemic barrier is the absence of universally-available, high-quality, affordable early childhood education and care programs in Canada. This deficiency is particularly important because of the great variability in early learning opportunities in homes across Canada. Canada also displays considerable variability in the availability of high calibre child care and developmental environments, programs, and services across neighbourhoods. For instance, there tends to be less access to such programs and services in low SES neighbourhoods (Hertzman, McLean, Kohen, Dunn, & Evans, 2002). As a result, many developmental issues of children in these neighbourhoods are not identified and addressed until later in childhood, when it might be too late to intervene successfully. Some of the barriers in low SES neighbourhoods are lower levels of awareness by parents of early child development and developmental milestones; work/life schedules that make it difficult to access available services when they are offered; limited access to transportation; and language barriers (Hertzman et al., 2002). Thus, the families with the most need often have the least support from community services.

A comprehensive, universal early learning and care system would address many of the early learning needs of children who do not receive appropriate support and stimulation within their home and within their communities. It is important to emphasize, however, that while there is a recognized need to give extra attention to children from poor families, 60% of Canada's vulnerable children come from middle class and affluent families (Willms, 2002). For this reason, it is important that Canada's early learning support system be universally available.

A related issue involves addressing the needs of adults with low literacy skills; as of today, Canada has not yet developed a coherent system to address these needs. Low literacy impacts Canadians in three ways: opportunity costs, remedial costs, and intergenerational costs. Opportunity costs associated with low literacy include unemployment, lower GDP, and lower income for the individual. Remedial costs include higher costs for health care services, criminal justice systems, and social assistance and social services demands. The intergenerational costs occur through neglecting adult literacy and passing on the challenges to the next generation. A national strategy on early literacy cannot therefore focus on early learning without considering parents' influential role in a child's development. Effective early childhood programs must include parents with low literacy levels as partners (Maxwell & Teplova, 2008).

“Many adults with low literacy skills are themselves parents. Research has shown that youth literacy levels are highly conditioned by parental skill levels. Thus, an investment in raising adult skill levels will precipitate improvements in their children's scores.”

McCracken & Murray, 2009, p. 12

Many children enter Canada's school system lacking a solid foundation for acquiring strong literacy skills and this is a result of the combined impacts of insufficient early learning supports in the home due to low literacy skills of parents, highly variable community supports for early learning and the absence of universally-available, centre-based, high-quality early learning and care programs. In fact, more than one in four children who enter Grade 1 are significantly behind their peers (Janus, 2006; Lloyd & Hertzman, 2008; Kershaw, Irwin, Trafford, & Hertzman, 2006; Willms, 2002). Furthermore, many Canadian schools are ill prepared to identify and deal effectively with such challenges when children start school. The result is that children who are disadvantaged at school entry tend to fall further and further behind their peers as they progress through the school years. Thus, early identification and intervention at school entry is critical. Students experiencing reading difficulties at the end of Grade 1 almost never achieve average reading skills scores by the end of primary school (Torgesen, 2004).

Moreover, many children who are well prepared to learn when they enter school nevertheless fail to acquire strong literacy skills alongside their peers. This fact points to the uneven quality of literacy-related instruction in Canadian schools. Many jurisdictions have identified the need to improve literacy instruction in schools, but progress has been slow and the education system continues to fail too many children. It is essential that changes occur in the way that reading and writing are taught in classrooms, as classroom experience is a critically important determinant of how well Canadian children will learn to read. Improving the way reading and writing are taught in Canada is therefore the single most important consideration for increasing literacy outcomes for Canadian students.

“Teachers must be taught how to teach reading to students. We all should recognize the catastrophic effects on learners and on society of our failure to teach reading.”

Bredberg, 2009

Such change requires improvements in Canada's system for preparing new teachers and in providing continuing professional education and teacher support programs. At present, many student teachers complete their university teacher preparation programs without learning the basic scientific principles behind the development of reading skill and effective reading instruction. As a result, the substantial body of knowledge on how to teach children to read, how to identify children who have failed to acquire specific reading skills, and how to intervene effectively is not being applied in many Canadian classrooms (Brodeur, Dion, Mercier, Laplante, & Bournot-Trites, 2008).

“Collective efforts must focus on increasing scientific knowledge in the area of reading instruction and acquisition, along with the improvement of reading instruction skills in all practicing regular and resource teachers.”

Brodeur et al., 2008, p. 27

Some schools face particular challenges. For example, rural schools are often smaller in size, resulting in more multi-grade or split classes. These schools may also have higher rates of teacher turnover, fewer opportunities for professional development for teachers, fewer resource teachers, and reduced access to speech-language pathologists and other professionals to support students with special needs (Lavin, 2009). These challenges can impede literacy outcomes for rural students. Moreover, other issues common to many rural communities may interact with educational system factors; these include increased rates of rural unemployment, lower average educational attainment among adults in the community, and lower average occupational and economic status among parents (CCL, 2008). The educational requirements of the jobs that are available within students' communities are strongly linked to students' literacy skills (Cartwright & Allen, 2002).

Barriers for individuals

A range of barriers can be described which hinder the acquisition of strong literacy skills for individuals. Addressing these barriers fosters equity, thereby increasing opportunities for the affected individuals to be successful.

First, sensory deficits have a substantial and clearly understood impact on the development of early literacy skills. Early identification of hearing and vision issues are therefore key factors for the timely development of strong language and literacy skills. Recognizing the importance of early identification and intervention for children with hearing loss, several Canadian provinces have implemented universal infant hearing screening programs. However, in many parts of Canada, childhood hearing loss may remain unidentified and untreated for a considerable time.

Children who are deaf or hard of hearing face steep barriers to successful literacy acquisition. These children often experience challenges with learning to read because lacking full (or any) access to the sounds of spoken language, they are unable to use the important phonemic awareness and phonics skills to assist in the decoding of written words (CCL, 2009a).

The typical student with a hearing loss graduates from high school with reading comprehension skills at approximately the fourth-grade level (Allen, 1986; Center for Assessment and Demographic Studies, 1991; Traxler, 2000).

Vision is another important component of acquiring literacy skills. Ten percent of preschoolers will have a vision deficiency, which increases to 1 in 4 students between Kindergarten and Grade 6 (The Alberta Association of Optometrists, 2009). It is estimated that 60% of children with learning difficulties have an undiagnosed vision problem. Undetected vision problems can cause frustration with learning, failure to learn at the rate of peers, a negative self image, a possible need for special education, discipline problems, young offender risks, increased drop out rates, and a potential burden on our prison and welfare system (Vaughn, Maples, & Hoenes, 2006). Children who are blind or visually impaired require high quality intervention and are otherwise at risk for literacy problems (Amato, 2000). However, many of these children receive instruction from paraprofessionals who may lack specialized training or awareness of effective literacy teaching practices (Forster & Holbrook, 2005; French, 1999; MacCuspie, 2002). Training and skill development is recommended to help paraprofessionals contribute more effectively to literacy development among blind or visually impaired children (MacCuspie, 2002; CCL, 2009a).

Second, children who do not develop strong early speech or language skills are at risk for developing poor reading and writing skills. It is possible to identify such children at an early age and to intervene appropriately (Baker, 2009).

Third, children with various types of disabilities often have significant difficulties with literacy. In Canada, approximately 175,000, or almost 5%, of Canadian children aged 5-14 are affected by some type of disability (Statistics Canada, 2007). Of these, 69% have a learning disability. Most of these children, 89%, require special education services. There is, however, no agreement across provinces regarding the definition of learning disabilities; consequently, children are provided different types and levels of service if they move across provinces. At the extreme, a student who moves can unexpectedly lose eligibility for special education services that were provided in their previous province (Kozey & Siegel, 2008a, 2008b).

The relationship among different types of disabilities, education, and literacy is complex. Canadians with learning disabilities tend to have less education overall (by approximately three years) than those who do not have a disability. In addition, each year of a person's education is associated with a 6% increase in literacy skills on average. Finally, individuals with learning disabilities show weaker literacy skills than those without a disability that have the same amount of education (Statistics Canada, 2007). Consequently, individuals with learning disabilities require specialized programming in order to ensure that they are able to achieve an adequate level of literacy skill.

Students with emotional or behavioural disorders are a much smaller group than students with learning disabilities, however, their educational outcomes tend to be more negative (Maccini, Gagnon, & Hughes, 2002). These students often present with behavioural challenges in the classroom, forcing teachers to focus more on managing their behaviour and less on their literacy achievement. Due to the behaviour problems, difficulties with learning are often missed. However, such students tend to respond as well to interventions as do those with learning disabilities (Jones, 2005).

Children with autism can have many factors that may contribute to their difficulties learning to read; these include problems with language, attention, and social interaction (Vacca, 2007), as well as a lack of motivation to read. Despite these difficulties, children with autism generally have intact phonological, morphological, and syntactic skills; however, these skills may be delayed. While some children with autism do not learn to read, many higher functioning children can become successful readers (CCL, 2009a).

Fourth, children from minority language contexts have difficulties with language and literacy skills. Among students in French school systems outside of Quebec, literacy achievement tends to be lower than for Francophone students in Quebec (Council of Ministers of Education, Canada [CMEC], 2004). When minority Francophone students enter school, they may be less ready to begin reading than their Anglophone counterparts due to limited early childhood French-language resources in the child's home and community. In addition, schools in minority language settings may have fewer French language resources, including teaching materials, educational software and library resources. Students who live in a Francophone setting and engage in French preschool literacy activities are up to six times more likely to succeed in Grade 3 reading evaluations (Duadet-Mitchell, 2009). Speaking and living the French culture at home, daycare, and preschool and engaging in French preschool literacy activities are important to ensure later preparation and success in French at school (Daudet-Mitchell, 2009).

Bilingualism may be a factor for Francophone students as they are more than twice as likely to be bilingual than Anglophone students. In many bilingual families who send their children to Francophone schools, the home language is English. As a result, a Francophone student's literacy skills in the French language may not reflect their overall literacy skill level: in some circumstances, bilingual Francophone students display better literacy skills in English than French (Landry & Allard, 1992). A substantial number of Francophone students in such a minority language setting may therefore enter school with relatively weaker French language skills. In turn, this situation may lead to lower achievement motivation and diminished performance expectations for students (CMEC, 2004).

Fifth, immigrant children living in homes where neither English nor French is spoken (English Language Learners/French Language Learners ELL/FLL), demonstrate clear literacy challenges (EQAO, 2008). These children require an average of 14 years of residence in Canada in order catch up with their Canadian-born peers academically (Bussiere et al., 2000). A lack of familiarity with the Canadian system decreases the ability of some immigrant parents to be effectively involved in their children's education. In addition, these ELL/FLL students have needs that extend beyond learning a second language, including adjusting to a new culture and integrating into a new society. All of these adjustments may restrict the development of important academic skills. Consequently, ELL/FLL students are more likely to leave school without obtaining a graduation diploma or a "general level" diploma, which will not allow them to undertake post-secondary education (Geva et al., 2009). Enabling ELL students with lower levels of English reading and language skills to remain in high school for longer periods while receiving appropriate instruction may help them improve their language and literacy skills and obtain the high school credits necessary to meet high-school graduation requirements (Geva et al., 2009).

Instruction in a well-developed heritage language (the students' mother tongue) can support and promote second language proficiency and literacy skills. It is therefore surprising that heritage language programs do not receive more emphasis in Canadian education. Higher-level literacy skills in English such as reading comprehension and writing are impaired by weaknesses in second language oral proficiency, including academic vocabulary and advanced syntactic skills. For example, Grade 9 and 10 adolescent students who are recent immigrants to Canada perform, on average, at a Grade 2 level on vocabulary and at a Grade 4 level on word-reading (Pasquarella, Grant, & Gottardo, 2007). Taken together, these findings indicate that ELL/FLL students are likely to face serious academic challenges when dealing with grade appropriate curriculum when their vocabulary knowledge does not match academic demands (Geva et al., 2009).

Sixth, another group of students that face challenges are Aboriginal children and youth, many of whom are impacted both by reduced availability of health professionals and other developmental specialists and by the language challenges of a home/community language which is neither Standard English nor French. For example, restricted access to health services may permit hearing, language, speech, or vision problems to remain unidentified and untreated, with serious consequences for the development of language and literacy skills. Available monitoring, screening, and diagnostic tools have rarely been validated for use with Aboriginal children (or for many groups of non-English or French speaking children). For Status Indian children living on reserves, follow-up services may be unavailable, even if problems are identified. Aboriginal children whose families live off reserve may face long wait lists for services if they live in urban centres and may find services almost entirely absent if they live in rural and remote areas (Ball, 2008).

“While there are commonalities in the biological unfolding of language and literacy capacities across all children, the cultural nature of development, as well as variations in access to supports and services, call for a focused consideration of the needs and approaches to supporting Aboriginal children’s language and literacy.”

Ball, 2008, p. 5

Aboriginal children and youth have high rates of school failure because of language and literacy difficulties or delays (e.g., Ball, 2008; CCL, 2007). For example, among Grade 4 students in British Columbia in 2003, the failure rate for literacy achievement was 16% higher for Aboriginal than for non-Aboriginal students; by Grade 7, this difference was 21% (Bell et al., 2004). Between 40% and 50% of Aboriginal students fail to meet the literacy requirements of Grades 4, 7, and 10. Aboriginal children’s attachment to and success in the education system is often weak due to their poor socioeconomic situation, which includes a high incidence of poverty and violence, poor parental support, low capacity of schools on reserves and in cities to respond to the needs of this group of children, as well as cultural and linguistic barriers to learning (Maxwell & Teplova, 2008).

The language of instruction may be an important factor in the success of Aboriginal students. It has been suggested that First Nations students’ access to education is reduced because linguistic, pedagogical and psychological barriers are created when the dominant language of instruction is English or French (Bear Nicholas, 2009). As discussed above for other English/French language learners, and for others learning in a minority language context, literacy acquisition in the mother tongue is likely to assist children in acquiring the necessary literacy skills. Children who attend schools where their mother-tongue is explicitly taught are shown to perform better academically and this instruction helps develop their abilities in the majority language as well (Cummins, 2001).

Finally, the environment in which children grow up has a significant influence on the development of literacy skills. Young people from disadvantaged communities face multiple risks that extend beyond low income. For example, parents are often unable or unwilling to build connections to the schools; this is especially true for parents who themselves had negative experiences in school, single parents or recent immigrants to Canada who have a limited capacity to speak English or French. Moreover, the schools themselves are not well adapted to supporting students with social and economic disadvantages and the community may present safety and lifestyle risks, such as addiction and violence. The students themselves may have had setbacks during their early school years, which make them distrustful of the school environment (Maxwell & Teplova, 2008).

Interventions to improve literacy

Most literacy challenges can be prevented through provision of a suitable environment which supports language and literacy development, coupled with explicit, systematic instruction to ensure that children acquire the various skills that are the foundation of reading. When challenges do occur, most can be remedied if they are identified early and appropriate intervention is provided (e.g., D'Angiulli, Siegel, & Maggi, 2004; Fletcher & Foorman, 1994; Foorman, Francis, Shaywitz, Shaywitz, & Fletcher, 1997).

Much is known about how to ensure that children and youth acquire appropriate literacy skills. Certain activities in the home, early learning childcare settings, schools and clinical settings are clearly associated with better literacy outcomes for children. There is also a substantial and growing body of knowledge regarding the effectiveness of various intervention approaches.

Many Canadian programs have been implemented in order to improve early literacy skills. Reviewing the most promising of these programs can assist our understanding of what can be done to improve literacy outcomes for children. The most promising of these programs are therefore described below. Each of these programs draws on international research to some degree, but it must be emphasized that there is a lack of systematic research evaluating such Canadian programs. Moreover, no large-scale, randomized control studies have yet been undertaken to evaluate such programs in Canada. For these reasons, the true impact of most of Canada's literacy instruction and intervention programs is presently unknown.

“We have learned that any focus other than on teaching and learning practices and home-school connections – such as changing governance structures or finance systems or implementing school choice – will not by itself create the desired improvements in students' learning.”

Levin, 2007, p. 10

Family literacy interventions

“When parents have knowledge about early literacy development, they are able to provide home environments that are rich with meaningful and embedded literacy experiences for preschool children.”

Pelletier, 2008, p. 9

Parents play a crucial role in children’s early learning. Ideally, they are able to provide a rich environment within which their children are helped to acquire strong language and literacy skills. Family literacy programs, which focus on developing literacy within the family as a whole, help parents to create such literacy-rich home environments. These family literacy programs are being conducted in a variety of community settings, including libraries, schools, churches, and community centres, as well as at home. The components of these programs include: 1) helping parents understand the importance of the home environment in developing children’s language and literacy skills; 2) helping parents acquire learning resources for use with their children; 3) teaching parents specific activities that promote language and literacy development; and 4) building the literacy skills of the parents.

Family literacy practitioners emphasize several general principles. First, programs should aim to involve all family members and other influential caregivers in a child’s life. For example, involving fathers in family literacy activities may be particularly useful for young males (Lavin, 2009). Second, family literacy programs should not be offered as an isolated support, but in conjunction with agencies that are already a part of a family’s support network. Finally, according to Onclin (2009), “family literacy programs [should] address three levels of learning: 1) intellectual (e.g., language, literacy, emergent literacy); 2) emotional (e.g., positive interactions and bonds, resiliency, confidence, security); and 3) social learning (e.g., connection to the community).”

There is some evidence that ELCC providers and families can play an important role in supporting literacy development through family literacy programs and through school-based integrated services for culturally and linguistically diverse populations (Pelletier, 2008). For example, evening family literacy workshops in local schools coordinated by volunteer ELCC teachers were shown to produce significant literacy gains for children, particularly in alphabet knowledge, conventions of print, meaning and vocabulary, and in changes in home literacy practices (e.g., increased library visits, increased shared reading, and decreased television viewing) (Pelletier, Reeve, & Halewood, 2006; Pelletier, Doyle, Press, & Zhang, 2007).

Sénéchal’s (2005) review of family literacy interventions on children’s acquisition of reading indicated that parent involvement had a positive impact on children’s reading acquisition from Kindergarten to Grade 3. Specifically, there was a 10-point gain on a literacy test for children who received family literacy interventions over those who did not. Having parents teach specific literacy skills to their children was *two times* more effective than having parents listen to their children read and *six times* more effective than parents reading to their child. The family literacy interventions examined in this review were as effective for children experiencing reading difficulties as they were for typically-developing children. These results indicate that home family literacy interventions can help children learn to read. However, the effectiveness of parents’ help on literacy acquisition varies according to the type of parent-child activity that is used in a family literacy intervention.

In several provinces, family literacy initiatives have been developed within the health care system to reach families with young children at a very early stage. For example, Nova Scotia's Read to Me! program (<http://readtome.ca>) distributes bags of books and literacy information to the mothers of newborn babies at all 11 hospitals across the province that provide maternity services. The program, started in 2002, has to date, delivered over 55,000 bags (Read to Me, 2009), reaching more than 95% of the babies born in the province (Centre for Research in Family Health, 2009). The bags are available in English, French, Chinese, Arabic, and Braille. The organization delivers books through hospitals to ensure that the program is universal. According to the program organizers:

Delivering a literacy program in a hospital setting reinforces the health literacy connection and gives parents the message that literacy is an integral part of their baby's overall health and well-being. We enhance the capacity of parents to promote a child's early language skills and cognitive development and support their role as their child's first and most important teacher. (McDougall, 2009)

In order to measure and improve the uptake of the program, a team of researchers from Dalhousie University and literacy professionals from Read to Me! are conducting a longitudinal study of this intervention. The first and second phases of data collection have been completed through systematic telephone interviews with over 1,650 families who received the Read to Me! bag (Centre for Research in Family Health, 2009). In addition, reading practices of parents in Nova Scotia who received a bag of books from the Read to Me! program when their baby was born were compared with reading practices of parents in Prince Edward Island who did not receive a bag of books. Preliminary results show that Nova Scotian parents who received the bags are reading to their babies significantly more than parents in Prince Edward Island – 74.1% vs. 53% (McDougall, 2009).

Similar programs are being developed in other provinces. For example, in British Columbia, the Books for BC Babies program (<http://books4babies.bclibrary.ca>) provides books and helps parents understand the importance of reading to their child. This program ensures that every baby (42,000 annually) born in British Columbia receives a free book bag. The distribution of these bags is coordinated by the public library in conjunction with other community agencies in each community.

In Nova Scotia's 13 First Nation communities, the books for babies approach has been extended to provide a developmentally appropriate book every month until the child turns five years old. Each book is provided together with suggestions for how the family can promote their child's literacy development. Dolly Parton's Imagination Library program (<http://www.imaginationlibrary.com>), which is one component of a larger "Wellness through Literacy" program, has received funding for all babies born in Nova Scotia's First Nation communities from 2008–2013. A formal evaluation of the program is planned to take place during Year 3 and following Year 5 (Desborough, 2009).

Older children can also benefit from support for literacy skill development. Many of Canada's public libraries play an important role in this regard through provision of community early literacy programs (e.g., story times for children and their caregivers at libraries) and through outreach programs (e.g., story times at local daycare centres and malls, and book mobile library services). Some library programs are more elaborate – for example, an Ottawa Public Library (<http://www.bibliottawalibrary.ca>) program takes a structured and systematic approach to early literacy, teaching parents how to help their children acquire the six building blocks of early literacy.

Family literacy programs can provide effective interventions for minority Francophone students, especially when they include: 1) resource kits that provide French language literacy resources (Lopez & Carrière, 2007); 2) community-based programs, specifically community school centres, where schools are used as a base for providing services in French (Landry, Allard, & Deveau, 2007); and 3) French-language early childhood education (CMEC, 2004). In Manitoba, for example, eight family centres in the Division scolaire franco-manitobaine schools (<http://www.dsfm.mb.ca>) offer French programs that include a story time and a free book exchange for the Francophone community (Colliou, 2009).

“Supporting minority Francophone parents in their efforts to contribute to their children’s early literacy development can be an effective way of alleviating the effects of limited French-language resources and institutional completeness for minority Francophone students.”

CCL, 2009b, p. 23

Several provinces have started to implement province-wide programs which involve supports for family literacy activities as an important component. For example, Ontario’s Early Years Centres (<http://www.gov.on.ca/children/oeyc>) are designed for children up to the age of six and their parents and caregivers; the centres give parents/caregivers and children the opportunity to participate in programs and activities together. In addition, these centres provide information on children’s development and on how parents and caregivers can support the development of children in their care. These services are offered free of charge at different times throughout the day, in the evenings, and on weekends. Services are provided not only for typically developing children, but also for children with special needs. Currently, there are over 100 Ontario Early Years Centres across the province; many of which have satellite sites and mobile programs. The centres are staffed by trained early years professionals, as well as volunteers.

British Columbia began to develop a series of “StrongStart” early learning centres in priority areas across the province in 2006 to prepare children for success in school. StrongStart BC (http://www.bced.gov.bc.ca/early_learning/strongstart_bc/) offers free services to preschool-aged children and their parents/caregivers. At the end of the 2008-09 school year, there are 200 centres operating across the province, with 100 more scheduled to be added next year. Out of 60 school districts in British Columbia, 58 are currently participating in the program. The centres are usually located at schools and are currently being expanded to rural and remote communities. Services are provided at least three hours a day and five days a week during the calendar year (British Columbia Ministry of Education, 2009a).

According to the Ministry of Education’s policy, StrongStart BC early learning centres are established to “promote the following areas of children’s development: physical health and well-being; social and emotional development; language and cognitive development; and communication skills of preschool-aged children” (British Columbia Ministry of Education, 2009b). The government is committed to investing \$43 million to establish 400 StrongStart BC centres across the province by 2010 (BC Liberals, n.d.). Each school district will receive \$50,000 to open a new StrongStart BC centre and an additional \$30,000 each year to cover operating costs.

In Manitoba, the Healthy Child Manitoba program coordinates early years programming and family resources, with Regional Health Authorities (RHA) having a major role. An ongoing community health assessment process tracks population and health data over the years, and regional parent-child coalitions provide practical support for family centres, community programs, and resources. The RHAs not only have the information required, but in rural regions, they are the only organizations that have the mandate, scope, and ability to initiate region-wide planning and programming (Roberts, 2009).

Some Canadian family literacy programs have grown and become national and even international in scope. For example, the Parent-Child Mother Goose Program (P-CMGP; <http://www.nald.ca/mothergooseprogram>), which started in Toronto in 1986, is currently in use across Canada, in China, and in Australia. P-CMGP targets parents who have low incomes, are isolated, educationally disadvantaged, new to the country or city, and/or lack positive role models for parenting. This program is designed to foster language development by providing parents with the basic knowledge and skills they need to engage in language mediated play. Parents are taught rhymes, songs, and stories to use with their children (Ball, 2008). A parallel program is also offered to children with hearing impairments. The American Sign Language (ASL) Parent-Child Mother Goose Program is unique in teaching nursery rhymes and songs to children to improve their sign language development, helping these children to develop age appropriate literacy skills and increase their readiness for school (Snodden, 2009).

Other Canadian family literacy programs are based on initiatives developed elsewhere in the world, with the goal of assisting parents to become engaged in their child's literacy development. One such program, which was designed to increase children's readiness for school, is the Home Instruction for Parents of Pre-school Youngsters (HIPPY) program. It was first developed in 1969 at the Hebrew University of Jerusalem, Israel (http://www.hippy.org.il/html/about_international.html). This parent-focused, home-based early intervention program provides parents with support, information and tools needed to become an effective "first teacher" for their child.

In Canada, the first HIPPY program began in Vancouver, British Columbia, in 2001 (<http://www.hippycanada.ca>). As of June 2009, HIPPY Canada has served 2,533 families through its sites. An American study on the impact of HIPPY on the school performance of more than 1,000 children in Grades 3 and 6 found that:

Participation in HIPPY had the following positive effects: 1) reduced levels of suspension; 2) higher grades; 3) higher achievement test scores; and 4) better classroom behavior. As a general rule, these effects were quite modest (effect sizes mostly about .2 to .3), but they persisted at both 3rd and 6th grades. (Bradley & Gilkey, 2002, p. 309)

Interventions in early learning/child care settings

More than one in four Canadian children who enter Grade 1 are significantly behind their peers and poorly prepared to learn (Janus, 2006; Lloyd & Hertzman, 2008; Kershaw, Irwin, Trafford, & Hertzman, 2006; Willms, 2002). Many of these children are not able to catch up to their peers and, as a result, become disruptive in school, fail to graduate, and are unable to fully participate in and contribute to society. This troubling statistic demonstrates that Canada needs to improve support for early learning.

Increasing numbers of Canadian children are now participating in formal daycare/early learning centres; these centres provide a particular opportunity to support early learning. According to Statistics Canada (2006), participation rates are increasing: in 2002-2003, 54% of Canadian children aged six months to five years received some type of non-parental child care, an increase from 42% over the previous eight years. This rise affected children from almost all backgrounds, and in all regions; for example, in rural areas, 52.4% of children were participating by 2002-03, an increase from 36.3% in 1994-95.

Attending high quality early learning and child care programs can improve children's language and literacy skills, readiness for school, and early school performance. Research shows that this is especially true for children from disadvantaged backgrounds who, following their attendance in quality early childhood development programs, had higher educational and occupational outcomes, such as staying in school longer and earning higher salaries later in life (Karoly & Bigelow, 2005). A large and growing number of Canadian children spend time in early learning and care programs, which provide a natural setting within which to help develop children's skills. Intensive early learning programs can also provide significant longer-term benefits for at-risk children, including a reduced need for remedial and special education services, increased graduation rates, increased employment prospects, and reduced incidence of delinquency and contact with the justice system (e.g., see Reynolds, Temple, Robertson, & Mann, 2002 – Title I Chicago Child-Parent Centres; Committee for Economic Development, 2006 – Abecedarian, Chicago CPC, and Perry Preschool; Currie, 2001 – Head Start).

The immediate and the long-term effects of high-quality child care on cognitive and language development of children have been reported in numerous studies (Barnett, 2001; Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey, 2001; NICHD & Duncan, 2003; Peisner-Feinberg et al., 1999). Evidence also demonstrates the substantial economic benefits of high quality early learning environments. For example, over 40% of the cost for early childhood programs in Quebec is paid for by the tax revenues obtained from mothers who could not work if affordable child care was not offered (Lefebvre & Merrigan, 2008). Economists from the University of Toronto estimated a \$2 return for every government dollar invested in high quality child care, reflecting reductions in costs for remedial education and provision of social services, and increased taxes paid by working parents (Cleveland & Krashinsky, 1998).

High quality preschool programs in the United States (e.g., the Abecedarian Early Childhood Intervention, the High/Scope Perry Preschool Program, the Chicago Child-Parent Preschool Center Program, Head Start) have clearly illustrated that the benefits of these programs significantly outweigh the costs. Returns to society from such programs have been estimated at between \$2.00 and \$8.74 per dollar invested (Nores, Belfield, Barnett, & Schweinhart, 2005). The short- and medium-term benefits of the Head Start program indicated that 40-60% of the total costs of the program were offset by these benefits alone (Nores et al., 2005). International research has also demonstrated the benefits of providing appropriate early support to at-risk children and has estimated the return on investment at up to \$7.00 for every \$1.00 invested (Coates, 2008).

It is important to emphasize that the initiatives noted above provided high quality, intensive early learning experiences. Programs that provide less intensive and lower-quality learning supports may not return proportional benefits. Moreover, the availability and quality of early learning and child care (ELCC) programs varies substantially across Canada's 13 provinces and territories. In 2004, Canada had over 745,000 regulated daycare spaces, with nearly half (just over 321,000) of them

being located in Quebec (Statistics Canada, 2006). Quebec comes closest to having a universally available ELCC program. Beginning in 1997 a low-cost (\$5/day; now \$7/day) centre-based child care program was introduced and this has been strengthened in subsequent years, to now be available to all Quebec children from birth through age four. Quebec parents thus pay far less than most other Canadians for child care expenses, and it is therefore not surprising that Quebec has the highest percentage of children aged six months to five years in non-parental child care (67%) out of all provinces, while Alberta (43%) has the lowest (Statistics Canada, 2006).

The overall quality of care in Quebec has improved under this initiative (Japel, Tremblay, & Côté, 2005). For example, data from the Quebec Longitudinal Study of Child Development, showed increased quality of formal and informal communication, increased communication support provided to children, and more frequent activities related to books and other materials that foster language development (Japel, Tremblay, & Côté, S., 2005). Kohen, Dahinten, Khan, and Hertzman (2008) analyzed five cycles of data from the Canadian National Longitudinal Survey of Children and Youth (1994/5-2002/3) to examine the impact of Quebec's implementation of universal child care. Since the inception of Quebec's universal child care program, Quebec led Canada in the provision of child care, although by 2002, "the use and availability of regulated child care in Quebec is lower compared to other countries. For example, 90-100% of 3- and 4-year-olds in France, Denmark, the Netherlands, New Zealand and Spain are in licensed child care or early education programs" (Kohen et al., 2008, p. 454).

Ontario plans for more integrated care and education of 4- and 5-year olds:

While we have some great programs with talented, dedicated people providing them, too often services are disconnected from each other. We leave it to families to bridge the gaps, avoid the overlaps, and negotiate their way, if they can. The current fragmented patchwork of early childhood services too often fails the best interests of our children, frustrates families and educators, and wastes resources. (Pascal, 2009, p. 4)

Ontario's overall plan is to coordinate services for families and high quality early learning for children through a continuum of services from birth to age 12. To help children succeed when they enter Grade 1, the plan recommends that: 1) school boards offer a two-year, full-day Early Learning Program for 4- and 5-year-olds prior to Grade 1, starting in September 2010, to be available province-wide within three years; 2) parents have a choice about their child's participation, including the option of full-day or half-day attendance; 3) fee-based programming (before and after traditional school hours and during the summer holidays) be offered at the request of 15 or more families; and 4) programs be staffed by well-trained teams of teachers and early childhood educators working with an established, consistent curriculum and approach to learning. The estimated fees for 4- and 5-year-old children would average \$6,750 annually or \$27 a day. These fees have been calculated based on children attending full year, extended day programming. Low-income families would receive child care fee subsidies to make this affordable (Pascal, 2009).

A number of Canada's early learning intervention programs target specific linguistic or cultural communities. As one example, Nova Scotia's Francophone school board (Conseil scolaire acadien provincial) implemented a new program when they found that 65% of the five-year-old children were arriving at school without speaking French. The board's "Growing up in French" program is for four-year-old children, and they report that, after four years of operation, 80% of their children now speak French when they begin school. In the 2007-08 school years, 152 children registered to attend this program (Conseil scolaire acadien provincial, 2008).

As another example, British Columbia's Aboriginal Child Care Society developed a speech and language initiative for parents and early childhood educators. This initiative uses toys and stories to help enhance language development for children aged 3-5 years. The activities and materials guide parents and educators in providing planned opportunities for children to practice language skills in child care and preschool settings, and at home. A workshop is used to demonstrate how to use the materials and to explain how the activities help to develop children's speech and language, social, and early literacy skills. This program is reported to have become extremely popular in Aboriginal early childhood programs in British Columbia (Ball, 2008).

Canada implemented a national Aboriginal Head Start (AHS) program, beginning in 1995. AHS is a half-day program intended for Aboriginal (Indian, Métis and Inuit) children between the ages of 2 and 5 years. While AHS differs substantially from the original Head Start approach introduced in the United States, its goal is similar: to prepare children for a successful transition from home to school learning environments. AHS has been implemented in approximately 126 communities across Canada. Programming in each AHS focuses on six components: 1) culture and language; 2) education and school readiness; 3) health promotion; 4) nutrition; 5) social support; and 6) parental and family involvement (Public Health Agency of Canada, 2004). The programs are free of charge. Most sites are operated primarily in English with some exposure to one or more Indigenous languages. No formal evaluation of this program is yet available. However, it is known that 20% of the sites have identified low literacy skills among parents as a serious challenge to parental involvement (Health Canada, 2000).

Classroom instruction and interventions

“There is reliable evidence from meta-analytic review that language-rich home and school environments, characterised by much shared book experience and purposeful and meaningful use of language through supporting naturalistic play and active learning, has a significant impact on early literacy. This appears particularly true in the K and pre-K years suggesting that school (literacy) and pre-school (language) initiatives should be closely linked to be effective.”

Savage, 2008, p. 7

Effective classroom instruction is essential in fostering children's reading development. The elements that should be included in order to achieve effective classroom instruction include: classroom management based on positive reinforcement and cooperation; balanced teaching of skills, literature, and writing; scaffolding and matching demands to student competence; encouragement of student's abilities; self-regulatory learning (i.e., students actively monitor their learning); cross curricular connections (e.g., reading and writing instruction in all subjects); and lessons that are broken down into clearly related components (Pressley et al., 2001). Research also indicates that children benefit from highly structured, well-focused, scaffolded, and explicit instructional strategies within a lesson; these lessons must have an obvious purpose and be related to achievement of a specific goal (Armbruster, Lehr, & Osborn, 2003). Many reading problems can be prevented if the above techniques are used for all children (Snow, Burns, & Griffin, 1998).

When reading difficulties do occur, classroom-based interventions can be effective in helping children with the difficulty. Swanson (1999) conducted a review of classroom-based intervention studies for children with reading disabilities and identified the instructional components that were most successful for student learning. These included building automaticity in basic skills (e.g., repetition-practice-feedback); segmenting information; scaffolding (e.g., controlling difficulty of the task); modelling problem solving steps; presenting cues to prompt strategy use; and directed response and questioning. These recommendations encompass direct instruction and instruction in strategy use.

To achieve effective reading instruction, lessons should include the main components of reading development. These components include: 1) print awareness; 2) decoding which includes letter knowledge, phonological awareness, phonemic awareness, and understanding the alphabetic principle; 3) vocabulary; 4) reading comprehension; and 5) fluency (CLLRNet, 2008).

The Committee on the Prevention of Reading Difficulties in Young Children, comprised of leading literacy researchers, completed a report for the U.S. National Research Council in 1998. They reported that:

There are three potential stumbling blocks that are known to throw children off course on the journey to skilled reading. The first obstacle, which arises at the outset of reading acquisition, is difficulty understanding and using the alphabetic principle—the idea that written spellings systematically represent spoken words. It is hard to comprehend connected text if word recognition is inaccurate or laborious. The second obstacle is a failure to transfer the comprehension skills of spoken language to reading and to acquire new strategies that may be specifically needed for reading. The third obstacle to reading will magnify the first two: the absence or loss of an initial motivation to read or failure to develop a mature appreciation of the rewards of reading. (Snow et al., 1998, p. 4-5)

Some children fail to make progress in reading despite having quality instruction in the early grades. Additional services should be provided to these children, preferably by a reading specialist who coordinates instruction with the classroom teacher.

Children who are having difficulty learning to read do not, as a rule, require qualitatively different instruction from children who are “getting it.” Instead, they more often need application of the same principles by someone who can apply them expertly to individual children who are having difficulty for one reason or another. (Snow et al., 1998, p. 12)

Classroom reading instruction should be systematic and comprehensive in nature, and designed to help all students to succeed. The Response to Intervention (RTI) framework provides universal screening to children to identify those who are at risk, systematically monitors those students who are falling behind their peers, and provides appropriate and immediate intervention for those children who have fallen behind (Vaughn & Fuchs, 2003). Students are provided with systematic reading instruction, followed by successively intensive and individualized interventions, as needed. These interventions are typically delivered by general education staff supported by other learning experts (Torgesen, 2009).

Brodeur et al. (2008) propose the adoption of the RTI (or Three-tier) model for reading instruction and acquisition in Canada. They believe that, “it is presently one of the most promising models to better support each student’s success in learning to read” (Brodeur et al., 2008, p. 28). The RTI model has been successfully adopted by many schools in the U.S. In fact, the U.S. has attempted to implement the RTI model on a large scale through the Reading First program, the largest federally

funded initiative to prevent the emergence of early reading difficulties. The goal is to bring this model to schools where the majority of students come from poor families or minority backgrounds. For example, Torgesen (2009) describes the results of using the RTI model in Florida, where the Reading First schools began using RTI in the 2003–2004 school year. Most students in this cohort come from low SES families (72%), are minority students (62%), and are English as a Second Language learners (14%).

In a little over three years, these schools have seen significant reductions in the numbers of students identified as learning disabled in Kindergarten to Grade 3 (e.g., the percentage of students identified as learning disabled at the end of Kindergarten fell from 2.1% to 0.4% from Year 1 to Year 3 of the program, an 81% decrease). In addition, there was a reduction in the number of students with serious reading difficulties (the percentage of students with reading skills at or below the 5th percentile fell by 30% from Year 1 to Year 3 in Grades 1 and 2, whereas for the same grades, the percentage of students identified with learning disabilities fell by 67% and 53%, respectively). Although these results are promising, they should be interpreted with caution as rates of referral and identification of reading disabilities are likely influenced by various factors outside of student reading improvements (Torgesen, 2009).

To date, only one Canadian school reading improvement initiative – ABRACADABRA (A Balanced Reading Approach for all Canadians Designed to Achieve Better Results for All) – has been evaluated through a randomized control trial (Savage, 2009). The ABRACADABRA program, designed for use with children in Kindergarten through Grade 2, provides a balanced approach to acquiring the full range of specific skills associated with accurate, fluent reading and writing, including phonics, spelling, writing, spoken expression, comprehension, and fluency. The program includes 32 activities, 17 linked stories, and 13 student stories. Making use of computer-based learning techniques, the program includes self-instruction components for use by students, a teacher module and printable resources; as well as videos on phonics and classroom management. There are built-in strategies for every word in each story. In a randomized control trial study, the program was shown to be effective in helping Grade 1 students develop letter-sound knowledge, phonological awareness, listening comprehension, and reading comprehension skills (Savage, Abrami, Hipps, & Deault, 2009).

Although only one Canadian reading improvement initiative has been extensively evaluated, all of Canada's education ministries have identified the improvement of literacy skills as being of the highest priority. Ministers from each province and territory have agreed to work together to improve the literacy levels of all Canadians. This is to be accomplished through the Council of Ministers of Education, Canada (CMEC)'s Literacy Action Plan, involving development of literacy frameworks in each jurisdiction (e.g., Alberta Government, 2008).

Initiatives that have been implemented to improve literacy skills vary widely across provinces, however. Ontario's Literacy and Numeracy Strategy (LNS) initiative, started in 2004, is Canada's largest and most successful initiative so far to improve literacy outcomes for elementary school children across an entire province. Under the LNS initiative, resources and a broad range of supports have been made available to schools and teachers, including teaching materials and guidebooks, a range of training materials and activities, and teaching support specialists. Schools and teachers have been facilitated to examine and share strategies for teaching reading and writing, and support has been provided for assessment and instructional improvement. The overall impact of this initiative has been clear, with sustained and cumulative increases in reading and writing achievement results over the duration of the Strategy initiative (CLLRNet, 2009).

While progress under the LNS initiative has been impressive, far too many children continue to fail to acquire the expected reading skills, demonstrating the need for additional improvement. For example, within Ontario's English language schools, fewer than 70% of Grade 3 and Grade 6 students met the target of at least Level 3 performance on provincial assessments in 2007-08. However, there was a significant improvement from previous years in reading, writing and mathematics scores. Furthermore, diverse groups of students (English, French, boys, girls, ESL/ELL, and special needs students) have all made an improvement, although there remain achievement gaps across sub-populations of students in Ontario. For example, girls continue to outperform boys on reading and writing, and the ESL and special needs students still have low levels of achievement. Interestingly, ESL/ELL students have made the most gains compared to other sub-populations in the last several years, and their achievement gaps are decreasing. The results for boys and special needs students are not definitive. The specific needs of all these sub-populations of students will continue to be addressed, while recognizing that the learning of all students can be improved by using many effective initiatives (CLLRNet, 2009).

In most Canadian provinces, specific literacy initiatives have not been planned centrally, but have been the responsibility of individual school boards. This has been the situation in New Brunswick, for example, where the Schools Early Literacy Project (<http://www.unb.ca/crisp/nbschools.html>) has studied interventions in different communities for students who struggle with literacy. The study involved 50 teachers (Kindergarten to Grade 2) and 3,000 students. One finding was that one-third of New Brunswick's children are poorly prepared to learn when they enter Grade 1 (Sloat, 2009).

A number of school boards have launched special initiatives. As one example, early literacy teachers (ELTs) and speech-language pathologists (SLPs) at Ontario's Peel District School Board developed a program to facilitate the development of reading skills for at-risk Grade 1 students. The rationale was that students' participation in this project would prevent the need for later intervention. Students were selected using teacher questionnaires, together with assessments of reading skill. The initiative focused on providing additional short-term support for participating students to help them to read at grade level. This support was provided through small group instruction by SLPs and ELTs. The parents of participating students were also encouraged to learn and apply strategies that would support their child's literacy development. Parents were involved through workshops, material sharing, and classroom observations (List, Hogarth, & Grieve, 2009).

Interventions reported for use with minority Francophone students include providing direct instruction, enriched French language environments, and activities to increase awareness of minority language status (CCL, 2009b). Conseil scolaire acadien provincial of Nova Scotia developed a reading/writing intervention program that is individualized and teaches reading and writing strategies to students. The program has also had a positive effect on the oral vocabulary of students (Bourque, 2009).

Community interventions

In addition to the home and school environment, communities can play an important role in the development of children's language and literacy skills. Community initiatives can reach a wide audience, communicate positive messages about the importance and enjoyment of reading, and can both model and support literacy activities. Communities across Canada provide tutoring, mentoring, and support for families. In many communities volunteers work with young students, directly within schools. For example, the OttawaReads program (<http://www.ocri.ca/education/ottawareads.asp>) relies on approximately 250 volunteers who read one-on-one with students; approximately 2,000 Kindergarten to Grade 3 students benefit from this program each year. Volunteers engage children in choosing books, in reading and critiquing what is read, and in developing communication skills, vocabulary and complex syntax. Many of the volunteers participate on company time, reflecting the importance businesses place on the program. The program benefits from approximately 40 business partnerships at the present time, with firms donating both employee time and sponsorship money (Jenkins, 2009). Similar programs are in place in a number of other centres across Canada, with some variation in program details. For example, in New Brunswick, AMEC employees tutor each participating child weekly through half-hour reading support sessions (Gillis, 2009).

More formal reading support programs using community volunteers are being planned. For example, beginning in the fall of 2009, a program called Elementary Literacy Friends Inc. in Saint John, New Brunswick, will use trained volunteers to provide the 150 hours of extra instruction thought to be necessary to substantially improve literacy levels for at-risk children. This program is a partnership between the provincial department of education, business and community leaders as well as community volunteers. More than 400 volunteers are being trained for the program. Children entering Grade 3 will be identified for program enrolment through provincial testing at the end of Grade 2. Participating children will be tested at regular intervals to track results, and a formal evaluation of the program will be conducted (Irving, 2009).

Community interventions can help to address the additional issue of the loss of skills over the summer recess. Specifically, children from low SES homes are much more likely to lose skills and knowledge over the summer than are their more privileged peers, who are more likely to benefit from participation in various recreational and summer learning activities. A number of centres are attempting to reduce this summer learning loss through programs for at-risk children. For example, the Community Schools Investigators' (CSI) Summer Learning Enrichment Program uses Winnipeg's inner city schools that would otherwise remain unused over the summer months to offer an enriched summer environment for underprivileged students. More than 75% of program participants are Aboriginal students. Testing completed in 2007 showed that 94% of participants maintained or improved their literacy scores over the summer session. The program is a community-wide effort involving government and various supporters including boards of education and private supporters (Reddy, Sigvaldson, & Botting, 2009).

SummerLAND is a similar school-based intervention program, offered in Langley, British Columbia. It provides reading instruction and dedicated recreational time for elementary school students who are performing below grade level or who show indications of potential regression over the summer. The program operates four days per week for four weeks, and reports promising results: in 2008, all of 93 primary students who were below Grade 1 reading level demonstrated significant gains and 40 met or exceeded the Grade 1 level standard by the end of the program (Jensen, 2009; Langley Schools, 2008).

In Quebec, the Learning Associates of Montreal, a bilingual non-profit centre, provides remediation and instruction to children over the summer, which allows them to read the required textbooks and follow courses as they progress through school (Bloch, 2009). The Toronto Public Library (TPL) developed the TD Summer Reading Club, a program that reaches half a million Canadian children during the summer, and the Toronto Festival of Storytelling, which reinforces the importance of oral stories in many cultures and their role in literacy (Settingington, 2009).

For older students, a range of community programs have been developed to encourage students to continue their education by finishing high school and pursuing post-secondary education. Since 2001, Pathways to Education, launched in the Regent Park area in Toronto, has offered a contract to students entering Grade 9. Students who promise to attend high school and participate in the program (with their parents committing as well) are eligible for four nights a week of tutoring, transit tickets to travel to school, group mentoring, a support worker to bridge the gap between the family and the school, and a \$4,000 bursary to be used toward post-secondary tuition. The total cost per student over four years is \$16,000, excluding the value of volunteer tutors and mentors (Maxwell & Teplova, 2008).

The results to date have been encouraging: 97% of the Grade 9 students and their parents have signed on, and, by the fall of 2006, there were 825 students participating in the program. Out of the first cohort of students, 75% graduated within five years. Of these, 82% went straight to college or university, and nearly all were the first in their family to receive post-secondary education. In addition, the drop-out rate for the students declined from 56% prior to the program to 12% or less. Finally, the rate of violent crime in the police division of the Regent Park area dropped by 32% and teenage pregnancies fell from 30 per thousand to 7.5 per thousand (The Boston Consulting Group, 2007).

Winnipeg's Bright Futures program (<http://www.7oaks.org/site/brightfutures>) was launched in 2008 with a similar approach and objective. A community-based organization depending on volunteers, the program focuses on school success, using tutoring, mentorship, and financial support to improve the graduation rate for participants and to achieve measurable positive changes within families and communities. Students must commit to four years of participation, including three hours of after school tutoring per week, four hours of mentorship per month, good school attendance, community service, and a minimum of 70% average. Those who participate can earn up to \$1,000/year for an RESP (Guenther, 2009).

There is a general need for greater collaboration and coordination in every jurisdiction to: 1) create a network of community services and neighbourhood activities that will improve children's readiness for school; 2) rally community and school resources to bring more family literacy and child development programming to the places where parents and children already gather; as well as 3) attract outside resources and support; and 4) add and incorporate evidence-based family literacy and child development programs into the existing array of services among diverse service providers (Willison, 2009). One approach is to create a unified location to serve all of families' needs, as in the recommendation to create a set of "Best Start Child and Family Centres" across Ontario (Pascal, 2009).

Clinical interventions

Without early detection and appropriate intervention, children with significant hearing, speech, language, and/or vision disorders are at risk for poor literacy outcomes (Catts & Kamhi, 2005). For example, approximately 4% of preschool children have a speech or language disorder (CASLPA, 2005), while an estimated 1 in 4 children are affected by undiagnosed vision problems as they begin school (The Alberta Association of Optometrists, 2009). In addition, in Canada, approximately 6 in every 1,000 babies, or over 2,000 babies per year, are born with some amount of hearing loss (The Hearing Foundation of Canada, 2007).

Universal infant screening programs and the availability of appropriate clinical service delivery programs permit early detection and effective intervention when sensory disorders are present in infancy. Physicians have early and regular interactions with young children as well as a privileged role as an advisor to parents. This role can be used to identify sensory and speech/language problems in toddlers and older children and to promote awareness of the importance of language and literacy development (Canadian Paediatric Society, 2006). At each visit, physicians can have substantial impact by informing parents of the importance of, and ways to promote, optimal language and literacy development, and by making parents aware of relevant developmental milestones and inquiring about the individual child's language progress (Canadian Paediatric Society, 2006).

Speech and Language Centres that provide clinical services can also support typically developing children. For example, Canada's Hanen Centre has become internationally known for language facilitation and intervention programs that harness the potential for primary caregivers to reinforce and promote children's social language and literacy skills. Hanen's intervention programs are designed to help parents and other caregivers to promote language development as part of a child's everyday social interactions (e.g., during meals, baths, playtime) both for typically developing children and for children who have a speech or language disorder (Manolson, Ward, & Doddington, 1995; Pepper & Weitzman, 2004; Weitzman & Greenberg, 2002).

Conclusions

Too many Canadians (42% of the population between the ages of 16-65) continue to fail to achieve Level 3 literacy proficiency, the minimum required level to cope with the demands of everyday life. Of particular concern is that over more than a decade from the first findings in 1994, Canada's results have shown little improvement.

Low literacy skills cost Canada billions of dollars annually. The costs associated with low literacy can be summarized as: 1) opportunity costs; 2) remedial costs; and 3) intergenerational costs. Opportunity costs include increased unemployment, reduced academic achievement, lower GDP, and lower income for the individual. Remedial costs include higher costs for health care services, criminal justice systems, education, and social assistance. Finally, intergenerational costs occur when the literacy challenges of parents are passed on to the next generation. The impact of increasing literacy skills is enormous: for example, if the level of literacy proficiency of every Canadian at Level 1 and 2 was raised to Level 3, the impact would include an additional \$11 billion in tax revenue each year and a saving of \$5 billion per year in employment insurance and social assistance payments.

Canadians have implemented many programs in their attempts to improve early literacy outcomes. However, very few of these initiatives undergo rigorous systematic evaluation to measure impact and assess the benefits provided. A proportion of these initiatives are based, at least to some degree, on programs that have been developed and evaluated in other countries. However, because it is common for programs in different centres to vary in intensity, resources, duration, and other details, it cannot be assumed that similar benefits are associated with new implementations of programs. Moreover, there is presently limited coordinated effort to share knowledge about programs, implementations, and outcomes. As a result, programs developed or implemented in one part of the country are rarely shared with other Canadians. Thus, it is impossible to know the impact of, and return on, most public investments for Canada's literacy initiatives.

Because of these factors, there is a clear need both to improve communication about what is being done and why, in order to avoid duplication of effort and inefficient use of resources in planning language and literacy programs. There is also a critically important need to undertake systematic evaluations of programs that are implemented, to measure their impact, to ensure that value is received for the resources being invested, and to identify opportunities to improve programs on an ongoing basis. In short, Canada requires a comprehensive approach to promote evaluation, networking and sharing of knowledge across regions and sectors in the early literacy area.

The actions that Canada needs to take to address the low literacy skills of its population are well understood. **Most literacy challenges can be prevented through an appropriate mix of: 1) effective instruction; 2) early learning experience; 3) systematic assessments (to identify any children who experience difficulty at an early age); and 4) appropriate intervention.**

To improve literacy skills for young Canadians, we need to develop a coherent system that implements what is known to be effective.

Recommendation #1

Encourage and assist initiatives that facilitate children’s language and literacy development from a very young age.

Rationale:

Language skills provide the foundation for literacy skills, thus the language environment to which children are exposed from an early age is very important. Experience gained within the family home from the time that children are very young has a significant impact on their language development.

While most parents wish for the best outcomes for their children, not all home environments presently support optimal language development; these children begin to fall behind their peers from the very beginning. It is therefore important to provide appropriate guidance and support for the families of all infants and young children and to assist vulnerable children through centre-based, high-quality early learning and care settings that provide the needed language-rich environment.

Because infants and young children are in contact with the health care system from the beginning, it is natural to use this system to provide early guidance and support. Recognizing the importance of literacy for better health and life outcomes, many hospitals, physicians, pediatricians, and home visiting programs by nurses have initiated such programs. For example, the health-care based initiatives that distribute “books to babies” provide a natural, universal, and effective channel to help parents to value, and understand how they can support the language and literacy development of their young children.

Ongoing supports are needed as children develop. Where possible, these should build on existing community resources, such as libraries, early learning and care centres, and schools. Preschools and early learning and care programs provide a highly-favourable return on investment, especially when the child’s home environment fails to provide support for language and literacy development.

Identifying and intervening at an early age with children who are at risk for poor language, literacy and learning outcomes as a result of sensory or cognitive development factors is essential for these children’s future success. Early identification and remediation of such developmental issues can significantly improve outcomes for children and can be highly cost effective.

Poor literacy development is more likely for children living in poverty, as well as for children in certain at-risk groups. Aboriginal (First Nations, Inuit, and Métis) children are especially vulnerable to poor language and literacy outcomes and must receive opportunities for participation in enriched early learning programs. Children in families where neither English nor French is spoken could also be at risk if they are not provided with supportive environments for language and literacy development. It is particularly important for agencies having responsibility for at-risk groups to provide support as a routine component of Canada’s immigrant orientation and settlement process.

Many Canadian adults have low literacy skills or are otherwise poorly equipped to assist their children to acquire the necessary language and literacy skills. Investing in improving the skills of adults can benefit children by increasing the effectiveness of parents as their child's first teacher.

The costs of the above initiatives are modest, and the returns on such investment are high.

Actions:

1. Implement initiatives that help parents to understand the importance of their child's language and literacy development and to engage in activities that support this development.
2. Build this guidance and support system around existing community resources that support early literacy such as hospitals, health clinics, libraries, schools, and early learning centres.
3. Facilitate the development of a system of high-quality, centre-based, enriched early learning and care programs for preschool children.
4. Ensure that pre-service and in-service training programs for early learning specialists provide a strong background on early language and literacy development.
5. Implement universal screening programs to identify important sensory and cognitive challenges at an early age (e.g., vision, hearing, language development, etc.) together with the appropriate intervention programs.
6. Develop targeted, evidence-based initiatives to improve outcomes for children in families where neither English nor French is spoken and for Aboriginal Canadians.
7. Support initiatives that improve the literacy skills of adults.

Recommendation #2

Ensure that appropriate teaching strategies, shown through rigorous, evidence-based research to be effective in developing strong literacy skills, are used in all Canadian classrooms.

Rationale:

Once children enter school, teachers play a very important role in children's language and literacy development. Teachers therefore require a deep understanding of how age appropriate literacy skills are acquired, and how these can be taught. They must also understand how to evaluate weaknesses in an individual child's literacy skills and also know the range of instructional and intervention techniques that can help the child to overcome these weaknesses. It is therefore imperative that both pre-service and in-service teacher training programs provide teachers with evidence-based knowledge on how to measure and to teach fundamental literacy skills to all children.

Teacher and resource teacher education should be based on a three-tier model for teaching children to read. Through this process, all children would receive a standard baseline of core classroom instruction, sufficient for most children to learn to read. Regular assessments would quickly identify the approximately 20% of children for whom this core instruction may have been insufficient, so that supplemental instruction can be provided before they fall far behind their peers. Further assessment and intensive intervention would then be provided for the approximately 5% of children who require this level of service.

Actions:

1. Enhance Canada's teacher training programs to ensure that all graduating teachers understand: a) how children learn to read; b) what instructional methods are effective for ensuring that children acquire strong reading skills; c) how to identify a child's specific literacy weaknesses; and d) what interventions are appropriate to address each weakness.
2. Enhance in-service training programs and within-school support services to develop such understanding and skill development among current teachers.
3. Ensure that each school and school board puts in place an explicit literacy assessment, instruction, support, intervention and monitoring process, implementing the three-tier model.
4. Ensure that all children acquire fundamental literacy skills through an evidence-based instructional program that must include systematic, direct, and explicit instruction, supporting the acquisition of essential alphabetic, code-breaking skills, and the development of strong oral language, vocabulary, grammar, fluency, and reading comprehension skills.

Encourage community engagement and support for ongoing literacy development throughout the year.

Rationale:

Communities possess physical and human resources that can be harnessed at a modest cost, to improve children's language and literacy skills. Currently, some programs organize community volunteers to provide literacy-specific tutoring for children with reading challenges. Other programs use corporate volunteers for more general tutoring and mentoring for vulnerable students and their families. In several Canadian cities, schools are now being used to provide vulnerable, inner-city children with recreation and learning programs during the summer months, when such children are otherwise likely to lose skills and fall behind their more privileged peers. These programs make use of schools that would be vacant during the summer and hire university students as program counselors. Such community-based programs require very modest investments while having the potential to yield very good returns.

In addition, at the community level, physicians can use their privileged advisory role to promote literacy among their young patients – with potential benefits for both the patients and the health care system in general. At each visit, physicians can have substantial impact by informing parents of the importance of, and ways to promote, optimal language and literacy development, and by making parents aware of relevant developmental milestones and inquiring about the individual child's language progress.

Actions:

1. Develop and advance community-based family literacy programs.
2. Encourage programs that engage community volunteers to work with young students within the school.
3. Support community-based programs for students in at-risk communities. Programs that engage local sports teams and businesses can be particularly effective.
4. Develop summer learning programs for at-risk children.
5. Encourage paediatricians and family physicians to work with childcare providers and literacy specialists at the community level to promote literacy locally, as well as within their practices.

Improve communication and the sharing of literacy-related knowledge and resources.

Rationale:

Public awareness of the status of literacy skills in the Canadian population is low, and there is very limited appreciation of the economic, social and personal impact that this situation has for Canada. There is a special concern that Canadian businesses and the federal government are neglecting the economic and social impact of low literacy skills. Canada's investment in research and evaluation activities to improve literacy outcomes is vanishingly small.

At present, knowledge and experience gained from initiatives to improve literacy undertaken in one part of the country are rarely shared with other Canadians. This leads to needless duplication of effort and inefficient use of resources. Canada requires a comprehensive approach to facilitate networking and the sharing of information across regions and sectors in the early literacy area.

Actions:

1. Communicate the urgency of Canada's need to improve literacy skills.
2. Improve the sharing of knowledge about programs and resources across Canada.
3. Support applied research and evaluation initiatives that address gaps in our knowledge of literacy skill development. These include:
 - i. Improving measurement instruments for a range of skills and populations, including for Francophone readers and other linguistic groups.
 - ii. Developing and evaluating improved interventions and instructional techniques.
 - iii. Performing systematic evaluations of programs and initiatives.
 - iv. Facilitating knowledge transfer, exchange, and application, within and across Canada's research, policy and practice sectors.
 - v. Promoting implementation of science research to enhance our capacity to "scale up" effective instruction techniques and interventions across whole education systems.

References

- Alberta Government. (2008). *A literacy framework for Alberta*. Retrieved July 21, 2009, from http://www.advancededucation.gov.ab.ca/media/133715/discussion_draft_2_literacy_framework.pdf
- Alexander, C. (2007). *Literacy matters: A call for action*. Toronto: TD Bank Financial Group. Retrieved July 10, 2009, from <http://www.td.com/economics/special/literacy0907.pdf>
- Allen, T. (1986). Patterns of academic achievement among hearing impaired students: 1974 and 1983. In A. Schildroth & M. Karchmer (Eds.), *Deaf children in America* (pp. 161-206). San Diego, CA: Little, Brown.
- Amato, S. S. (2000). Descriptive study of standards and criteria for competence in Braille literacy within teacher preparation programs in the United States and Canada. *Dissertation Abstracts International*, 61 (09), 3518A. (UMI No. 9989267).
- Armbruster, B. B., Lehr, F., & Osborn, J. (2003). *Put reading first: The research building blocks for teaching children to read. Kindergarten through Grade 3* (2nd ed.). Jessup, MD: ED Pubs. Retrieved July 21, 2009, from <http://www.nifl.gov/publications/pdf/PRFbooklet.pdf>
- Baker, E. (2009, March). *Becoming an advocate for your child*. Paper presented at the public consultation for the National Strategy for Early Literacy, Halifax, NB.
- Ball, J. (2008). *National Strategy for Early Literacy. Aboriginal young children's language and literacy development: Progress, promising practices, and needs*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_Aboriginal08.pdf
- Barnett, W. S. (2001). Preschool education for economically disadvantaged children: Effects on reading achievement and related outcomes. In S. Neuman & D. Dickinson (Eds.), *Handbook of early literacy research* (pp. 421-43). New York: Guilford Press.
- BC Liberals. (n.d). Education. Retrieved July 21, 2009, from http://www.bcliberals.com/bc_liberal_record/k-12_investment_&_capital
- Bear Nicholas, A. (2009, March). *Increasing literacy in Canada's indigenous peoples*. Paper presented at the public consultation for the National Strategy for Early Literacy, Fredericton, NB.
- Bell, D., Anderson, K., Fortin, T., Ottoman, J., Rose, S., Simard, L. et al. (2004). *Sharing our success: Ten case studies in Aboriginal schooling*. Kelowna, BC: Society for the Advancement of Excellence in Education.
- Bloch, P. (2009, March). *Assessing and treating individuals with learning disabilities*. Paper presented at the public consultation for the National Strategy for Early Literacy, Montreal, QC.
- Bourque, G. (2009, March). *Le Conseil scolaire acadien provincial*. Paper presented at the public consultation for the National Strategy for Early Literacy, Halifax, NS.
- Bradley, R. H., & Gilkey, B. (2002). The impact of the Home Instruction Program for Preschool Youngsters (HIPPPY) on school performance in 3rd and 6th grades. *Early Education & Development*, 13, 302-311.
- Bredberg, E. (2009, March). *Teaching readers to teach reading*. Paper presented at the public consultation for the National Strategy for Early Literacy, Vancouver, BC.
- British Columbia Ministry of Education. (2009a). *StrongStart BC program continues to expand*. Retrieved July 21, 2009, from http://www2.news.gov.bc.ca/news_releases_2005-2009/2009EDUC0083-000901.htm
- British Columbia Ministry of Education. (2009b). Policy document: *StrongStart BC early learning centre*. Retrieved July 21, 2009, from http://www.bced.gov.bc.ca/policy/policies/strong_start.htm
- Brodeur, M., Dion, E., Mercier, J., Laplante, L., & Bournot-Trites, M. (2008). *National Strategy for Early Literacy. Reading skills development: The role and education of regular and resource teachers*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_Role_TeachersEN.pdf
- Bussiere, P., Cartwright, F., Crocker, R., Ma, X., Oderkirk, J., & Zhang, Y. (2000). *Measuring up: The performance of Canada's youth in reading, mathematics and science*. OECD PISA Study – First Results for Canadians aged 15. Ottawa: Human Resources Development Canada, Statistics Canada, and Council of Ministers of Education, Canada. Retrieved August 11, 2009, from <http://www.pisa.gc.ca/pisa/81-590-xpe.pdf>
- Campbell, F. A., Pungello, E. P., Miller-Johnson, S., Burchinal, M., & Ramey, C. T. (2001). The development of cognitive and academic abilities: Growth curves from an early childhood educational experiment. *Developmental Psychology*, 37(2), 231-242.
- Canadian Council on Learning (CCL). (2008). *National Strategy for Early Literacy. Closing Canada's rural/urban literacy gap*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_Rural_Urban08.pdf

- Canadian Council on Learning (CCL). (2009a). *National Strategy for Early Literacy. Literacy among Canadian students with disabilities*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_Disabilities09_web.pdf
- Canadian Council on Learning (CCL). (2009b). *National Strategy for Early Literacy. Literacy among Canadian students in minority language contexts*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_MinorityLanguage09.pdf
- Canadian Language and Literacy Research Network (CLLRNet). (2008). *Foundations for literacy: An evidence based toolkit for the effective reading and writing teacher*. London, ON: Author.
- Canadian Language and Literacy Research Network (CLLRNet). (2009, Spring). *The impact of the Literacy and Numeracy Secretariat: Changes in Ontario's education system*. Report for the Ontario Ministry of Education. London, ON: Author.
- Canadian Paediatric Society. (2006). Read, speak, sing: Promoting literacy in the physician's office. *Paediatric Child Health, 11*, 601-606. Retrieved July 21, 2009, from <http://www.cps.ca/ENGLISH/statements/PP/pp06-01.pdf>
- Cartwright, F., & Allen, M. K. (2002). Understanding the Rural – Urban Reading Gap. Ottawa: Culture, Tourism and the Centre for Education Statistics Division. Retrieved July 21, 2009, from <http://www.statcan.ca/english/research/81-595-MIE/81-595-MIE2002001.pdf>
- CASLPA. (2005). *General speech & hearing fact sheet*. Retrieved July 15, 2009, from <http://www.caslpa.ca/PDF/fact%20sheets/speechhearingfactsheet.pdf>
- Catts, H. W., & Kamhi, A. G. (2005). *Language and reading disabilities*. Boston: Allyn & Bacon.
- Center for Assessment and Demographic Studies. (1991). *Stanford achievement test: Hearing-impaired norms booklet (8th ed.)*. Washington, DC: Gallaudet University, Gallaudet Research Institute, Center for Assessment and Demographic Studies.
- Centre for Research in Family Health. (2008). *Read to Me! uptake study (REMUS)*. Retrieved July 20, 2009, from <http://www.crfh.ca/research.php?project=14&nav=info>
- Cleveland, G., & Krashinsky, M. (1998). *The benefits and costs of good childcare: The economic rationale for public investment in young children*. Toronto, ON: Childcare Resource and Research Unit, Centre for Urban and Community Studies, University of Toronto.
- Coates, P. (2008). *Early childhood development in BC: First Call's framework for action*. Vancouver, BC: First Call BC Child and Youth Advocacy Coalition. Retrieved August 18, 2009, from <http://www.firstcallbc.org/pdfs/EarlyChildhood/1-framework%202008.pdf>
- Colliou, J. (2009, March). *La Coalition francophone de la petite enfance du Manitoba*. Paper presented at the public consultation for the National Strategy for Early Literacy, Winnipeg, MB.
- Coulombe, S., Tremblay, J-F., & Marchand, S. (2004). *International Adult Literacy Survey: Literacy scores, human capital and growth across fourteen OECD countries* (Cat. No. 89-552-XPE, no. 11). Ottawa, ON: Statistics Canada. Retrieved August 27, 2009, from <http://www.statcan.gc.ca/pub/89-552-m/89-552-m2004011-eng.pdf>
- Coulombe, S., & Tremblay, J. F. (2006). *International Adult Literacy Survey: Human capital and Canadian provincial standards of living* (Cat. No. 81-552-MIE, no. 14). Ottawa, ON: Statistics Canada. Retrieved September 9, 2009, from <http://www.statcan.gc.ca/pub/89-552-m/89-552-m2006014-eng.pdf>
- Committee for Economic Development. (2006). *The economic promise of investing in high-quality preschool: Using early education to improve economic growth and the fiscal sustainability of states and the nation*. Washington, DC: Committee for Economic Development.
- Conseil scolaire acadien provincial. (2008). *Grandir en accueil/francisation*. Saulnierville, NS: Author. Retrieved July 21, 2009, from http://csap.ednet.ns.ca/pdf/rap_grandir.pdf
- Constitution Act. (1867). Section 93. Retrieved August 19, 2009, from http://laws.justice.gc.ca/en/const/c1867_e.html
- Correctional Service of Canada. (1998). *A two-year follow-up of federal offenders who participated in the Adult Basic Education (ABE) program*. Retrieved July 9, 2009, from http://www.csc-scc.gc.ca/text/rsrch/reports/r60/r60_e.pdf
- Council of Ministers of Education, Canada. (2004). *Pan-Canadian results of Francophone students in a minority-language setting in the School Achievement Indicators Program (SAIP)*. Toronto: CMEC.
- Cummins, J. (2001). Bilingual children's mother tongue: Why is it important for education? *Sprogforum, 19*, 15-20. Retrieved July 17, 2009, from <http://inet.dpb.dpu.dk/infodok/sprogforum/Espr19/CumminsENG.pdf>
- Currie, J. (2001). Early childhood education programs. *Journal of Economic Perspectives, 15*(2), 213-238.
- D'Angiulli, A., Siegel, L. S., & Maggi, S. (2004). Literacy instruction, SES, and word-reading achievement in English-language learners and children with English as a first language: A longitudinal study. *Learning Disabilities Research & Practice, 19*, 202-213.
- Daudet-Mitchell, L. (2009, March). *Living in French in early childhood and learning in French schools: Is there a connection?* Paper presented at the public consultation for the National Strategy for Early Literacy, Winnipeg, MB.
- Department of Finance Canada. (2009a). *Canada Social Transfer*. Ottawa, ON: Author. Retrieved August 5, 2009, from <http://www.fin.gc.ca/fedprov/cst-eng.asp>

- Department of Finance Canada. (2009b). *Equalization Program*. Ottawa, ON: Author. Retrieved August 5, 2009, from <http://www.fin.gc.ca/fedprov/eqp-eng.asp>
- Desborough, K. (2009, March). *The Storysacks program: A family literacy tool for First Nation communities*. Paper presented at the public consultation for the National Strategy for Early Literacy, Halifax, NS.
- Desrochers, A., & Glickman, V. (2008). *National Strategy for Early Literacy. Reading assessment policy research: Understanding elementary reading assessment options*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_ElementaryReading.pdf
- Education Quality and Accountability Office (EQAO). (2008). *EQAO's provincial report on the results of the 2007–2008 assessments of reading, writing and mathematics primary division (Grades 1–3) and junior division (Grades 4–6), and the Grade 9 assessment of mathematics*. Retrieved July 9, 2009, from http://www.eqao.com/pdf_e/08/369e_ProvincialReport_08_web.pdf
- Federal Provincial and Territorial Advisory Committee on Population Health. (1999). *Toward a healthy future: Second report on the health of Canadians*. Ottawa, ON: Health Canada. Retrieved July 10, 2009, from http://www.injuryresearch.bc.ca/admin/DocUpload/3_20061214_101307toward_a_healthy_english.pdf
- Fletcher, J. M., & Foorman, B. R. (1994). Issues in definition and measurement of learning disabilities: The need for early intervention. In G. R. Lyon (Ed.), *Frames of reference for the assessment of learning disabilities: New views on measurement issues* (pp. 185-200). Baltimore, MD: Brookes Publishing.
- Foorman, B. R., Francis, D. J., Shaywitz, S. E., Shaywitz, B. A., & Fletcher, J. M. (1997). The case for early reading intervention. In B. Blachman (Ed.), *Foundations of reading acquisition and dyslexia: Implications for early intervention*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Forster, E. M., & Holbrook, M. C. (2005). Implications of paraprofessional supports for students with visual impairments. *Rehabilitation Education for Blindness and Visual Impairment*, 36(4), 155-163.
- French, M. M. (1999). *Starting with assessment: A developmental approach to deaf children's literacy*. Washington, DC: Gallaudet University Press.
- Geva, E., Gottardo, A., Farnia, F., & Byrd Clark, J. (2009). *National Strategy for Early Literacy. Children for whom English/French is not their first language*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_FirstLanguage.pdf
- Gillis, G. (2009, March). *Private sector involvement in literacy improvement*. Paper presented at the public consultation for the National Strategy for Early Literacy, Fredericton, NB.
- Guenther, K. (2009, March). *Bright Futures programs*. Paper presented at the public consultation for the National Strategy for Early Literacy, Winnipeg, MB.
- Health Canada. (2000). *Children making a community whole: A review of Aboriginal Head Start in urban and northern communities*. Ottawa, ON: Author. Retrieved July 21, 2009, from http://www.phac-aspc.gc.ca/dca-dea/publications/pdf/cmacw_final_e.pdf
- Hertzman, C., McLean, S. A., Kohen, D. E., Dunn, J., & Evans, T. (2002). *Early development in Vancouver: Report of the Community Asset Mapping Project (CAMP)*. Vancouver, BC: Human Early Learning Partnership. Retrieved July 14, 2009, from <http://dsp-psd.pwgsc.gc.ca/Collection/H118-16-2002E.pdf>
- Irving, J. (2009, March). *Making the case for a Literacy Institute*. Paper presented at the public consultation for the National Strategy for Early Literacy, Fredericton, NB.
- Jamieson, D. G. (2006). Literacy in Canada. *Paediatrics and Child Health*, 11, 573-574. Retrieved July 10, 2009, from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2528650>
- Janus, M. (2006). Measuring community early child development. *CAP Journal*, 14(3), 12–14.
- Japel, C., Tremblay, R. E., & Côté, S. (2005). Quality counts! Assessing the quality of daycare services based on the Quebec Longitudinal Study of Child Development. *IRPP Choices*, 11(5), 1-42.
- Jenkins, S. (2009, March). *When OttawaReads... Everyone benefits!* Paper presented at the public consultation for the National Strategy for Early Literacy, Ottawa, ON.
- Jensen, L. (2009, March). *SummerLAND (literacy and numeracy days)*. Paper presented at the public consultation for the National Strategy for Early Literacy, Vancouver, BC.
- Johnson, B., Manyika, J., & Yee, L. (2005). The next revolution in interactions. *The McKinsey Quarterly*, 4, 21-33.
- Jones, F. (2005). Meta-analysis of reading interventions for students with learning and emotional disabilities. (Doctoral Dissertation, University of North Texas).
- Karoly, L., & Bigelow, J. (2005). *The economics of investing in universal preschool in California*. Santa Monica, CA: RAND.
- Kershaw, P., Irwin, L., Trafford, K., & Hertzman, C. (2006). *The British Columbia atlas of child development* (1st ed.). Vancouver, BC: Human Early Learning Partnership, University of British Columbia.
- Kohen, D., Dahinten, V. S., Khan, S., & Hertzman, C. (2008). Child care in Quebec: Access to a universal program. *Canadian Journal of Public Health*, 99, 451-455.
- Kozey, M., & Siegel, L. S. (2008a). Definitions of learning disabilities in Canadian provinces and territories. *Canadian Psychology*, 49(2), 162-171.

- Kozey, M., & Siegel, L. S. (2008b). *National Strategy for Early Literacy. Canadian provincial policy definitions of learning disabilities*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_LearningDisabilities08.pdf
- Langley Schools. (2008). SummerLAND program. Retrieved July 21, 2009, from http://www1.sd35.bc.ca/board/Board%20News%20Documents/081104-board_news/SummerLand_brochure.pdf
- Landry, R., Allard, R., & Deveau, K. (2007). Bilingual schooling of the Canadian francophone minority: A cultural autonomy model. *International Journal of the Sociology of Language*, 185, 133-162.
- Landry, R., & Allard, R. (1992). Ethnolinguistic vitality and the bilingual development of minority and majority group students. In W. Fase, K. Jaspaert, & S. Kroon (Eds.), *Maintenance and loss of minority languages*. Philadelphia, PA: John Benjamins Publishing Co.
- Lapointe, V., Ford, L., & Zumbo, B. (2007). Examining the relationship between neighborhood environment and school readiness for Kindergarten children. *Early Education and Development*, 18, 473-495.
- Lavin, T. (2009, March). *Literacy issues among special populations: Rural students, students with disabilities, minority francophone students*. Paper presented at the public consultation for the National Strategy for Early Literacy, Winnipeg, MB.
- Lefebvre, P., & Merrigan, P. (2008). Childcare policy and the labor support of mothers: A natural experiment for Canada. *Journal of Labor Economics*, 26(3), 519-548.
- Levin, B. (2007). *National Strategy for Early Literacy. Large-scale efforts to improve literacy*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_LargeScaleEfforts08.pdf
- List, S., Hogarth, B., & Grieve, J. (2009, March). *Early learning initiatives in the Peel District School Board and the York Region District School Board*. Paper presented at the public consultation for the National Strategy for Early Literacy, Toronto, ON.
- Lloyd, J., & Hertzman, C. (2008). From EDI to FSA: Longitudinal analysis with linked population data. In J. Lloyd (Ed.), *Bringing it together*. Ottawa, ON: Early Childhood Learning Knowledge Centre, Canadian Council on Learning.
- Lopez, G., & Carrière, F. (2007). *Rapport annuel 2006-2007*. Réseau d'experts en alphabétisation familiale, La Fédération canadienne pour l'alphabétisation en français. Retrieved November 20, 2008, from <http://www.fcfa.net/documents/pdf/alphafamiliale/rapportannuelalphafamiliale2006-2007.pdf>
- Maccini, P., Gagnon, J. C., & Hughes, C. (2002). Technology-based practices for secondary students with learning disabilities. *Learning Disability Quarterly*, 25, 247-261.
- MacCuspie, P. A. (2002). *Access to literacy instruction for students who are blind or visually impaired*. Retrieved July 16, 2009, from <http://www.braille200.ca/documents/Access%20to%20Literacy%20Instruction%20for%20Students.doc>
- Manolson, A., Ward, B., & Doddington, N. (1995). *You make the difference: in helping your child learn*. Toronto: Hanen Centre.
- Maxwell, J., & Teplova, T. (2008). *National Strategy for Early Literacy. Canada's hidden deficit: The social cost of low literacy skills*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_SocialCost08.pdf
- McCracken, M., & Murray, T. S. (2009). *National Strategy for Early Literacy. The economic benefits of literacy: Evidence and implications for public policy*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_Economic_benefits.pdf
- McDougall, C. (2009, March). *The role of early literacy programs in improving literacy outcomes in Canada*. Paper presented at the public consultation for the National Strategy for Early Literacy, Halifax, NS.
- Murray, T. S., McCracken, M., Willms, D., Jones, S., Shillington, R., & Stucker, J. (2009). *Addressing Canada's literacy challenge: A cost/benefit analysis*. Retrieved July 20, 2009, from http://www.nald.ca/library/research/cost_benefit/cost_benefit.pdf
- National Institute of Child Health and Human Development (NICHD), & Duncan, G. J. (2003). Modeling the impacts of child care quality on children's preschool cognitive development. *Child Development*, 74(5), 1454-1475.
- Nores, M., Belfield, C. R., Barnett, W. S., & Schweinhart, L. (2005). Updating the economic impacts of the High/Scope Perry Preschool program. *Educational Evaluation and Policy Analysis*, 27(3), 245-261.
- Onclin, K. (2009, March). *Literacy develops in families first*. Paper presented at the public consultation for the National Strategy for Early Literacy, Edmonton, AB.
- Ontario Minister of Children and Youth Services. (2007). *Ontario's early childhood development and early learning and child care: Investments and outcomes*. Retrieved July 10, 2009, from <http://www.gov.on.ca/children/graphics/262145.pdf>
- Organisation for Economic Co-Operation and Development (OECD), & Human Resources and Skills Development Canada (HRSDC). (1997). *Literacy skills for the knowledge society: Further results from the International Adult Literacy Survey*. Paris and Ottawa: Author.

- Pascal, C. E. (2009). *With our best future in mind: Implementing early learning in Ontario*. Report to the Premier. Ottawa, ON: Government of Ontario. Retrieved July 14, 2009, from <http://www.oeyc.ca/pdf%20files/Charles%20Pascal%20Report.pdf>
- Pasquarella, A., Grant, A., & Gottardo, A. (2007, May). *The role of print exposure and gender in L1 and L2 adolescent readers*. Poster presented at the annual conference of the Ontario Branch of the International Dyslexia Association. Toronto, ON.
- Peisner-Feinberg, E., Burchinal, M., Clifford, R., Yazejian, N., Culkun, M., Zelazo, J., et al. (1999). *The children of the cost, quality, and outcomes study go to school: Technical report*. Chapel Hill: University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Center.
- Pelletier, J. (2008). *National Strategy for Early Literacy. The role of parents, families and caregivers in young children's literacy development: A review of programs and research*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_RoleOf08.pdf
- Pelletier, J., Doyle, A., Press, A., & Zhang, J. (2007, June). *Promoting family literacy in diverse Canadian contexts: New developments*. Paper presented at the annual meeting of the Canadian Language and Literacy Research Network, Calgary, AB.
- Pelletier, J., Reeve, R., & Halewood, C. (2006). Young children's knowledge-building and literacy development through Knowledge Forum. *Early Education and Development, 17*(3), 323–346.
- Pepper, J., & Weitzman, E. (2004). *It takes two to talk: a practical guide for parents and children with language delays*. Toronto: The Hanen Centre.
- Pressley, M., Wharton-McDonald, R., Allington, R., Block, C. C., Morrow, L., Tracey, D., et al. (2001). A study of effective first grade literacy instruction. *Scientific Studies of Reading, 15*(1), 35-58.
- Public Health Agency of Canada. (2009). *The Chief Public Health Officer's report on the state of public health in Canada 2008*. Ottawa, ON: Author. Retrieved August 27, 2009 from <http://www.phac-aspc.gc.ca/publicat/2008/cphorsphc-respcacsp/index-eng.php>
- Public Health Agency of Canada. (2004). *Program overview*. Retrieved July 21, 2009, from http://www.phac-aspc.gc.ca/dca-dea/programs-mes/ahs_overview-eng.php
- Purcell-Gates, V. (2009, March). *Increasing literacy levels of Canadian students*. Paper presented at the public consultation for the National Strategy for Early Literacy, Vancouver, BC.
- Read to Me! (2009). *Connect: The Read to Me! quarterly*. Retrieved July 15, 2009, from <http://readtome.ca/connect/summer09.pdf>
- Reddy, S., Sigvaldson, M., & Botting, K. (2009, March). *Community School Investigators Summer Learning Enrichment Program 2008*. Paper presented at the public consultation for the National Strategy for Early Literacy, Winnipeg, MB.
- Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2002). Age 21 cost-benefit analysis of the title I Chicago child-parent centers. *Educational Evaluation and Policy Analysis, 24*(4), 267-303.
- Roberts, J. (2009, March). *The South Eastman experience*. Paper presented at the public consultation for the National Strategy for Early Literacy, Winnipeg, MB.
- Rootman, I., & Gordon-El-Bihbey, D. (2008). *A vision for a health literate Canada*. Ottawa, ON: Canadian Public Health Association. Retrieved July 20, 2009, from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf
- Savage, R. (2008). *National Strategy for Early Literacy. Evidence-informed teaching strategies for improved literacy skills*. London, ON: Canadian Language and Literacy Research Network. Retrieved July 10, 2009, from http://docs.cllrnet.ca/NSEL/Current/NSEL_Evidence-based08.pdf
- Savage, R. (2009, March). *The Learning toolkit*. Paper presented at the public consultation for the National Strategy for Early Literacy, Montreal, QC.
- Savage, R., Abrami, P., Higgs, G., & Deault, L. (2009). A randomized controlled trial study of the ABRACADABRA reading intervention program in Grade 1. *Journal of Educational Psychology, 101*(3), 590-604.
- Sénéchal, M. (2005). *The effect of family literacy interventions on children's acquisition of reading from Kindergarten to Grade 3: A meta-analytic review*. Washington, DC: National Institute for Literacy. Retrieved July 14, 2009, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/29/99/ea.pdf
- Settingington, K. (2009, March). *Toronto Public Library's commitment to early literacy*. Paper presented at the public consultation for the National Strategy for Early Literacy, Toronto, ON.
- Sloat, E. (2009, March). *Creating a coherent system of childhood education*. Paper presented at the public consultation for the National Strategy for Early Literacy, Fredericton, NB.
- Snodden, K. (2009, March). *Canadian Cultural Society of the Deaf*. Paper presented at the public consultation for the National Strategy for Early Literacy, Toronto, ON.
- Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. National Research Council. Washington, DC: National Academy Press.

- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360-407.
- Statistics Canada. (2006). *Child care in Canada* (Cat. No. 89-599-MIE). Ottawa, ON: Author. Retrieved July 21, 2009, from <http://www.statcan.gc.ca/pub/89-599-m/89-599-m2006003-eng.pdf>
- Statistics Canada. (2007). *Participation and Activity Limitation Survey 2006: Analytical Report*. Statistics Canada (Cat. No. 89-628-XIE). Ottawa, ON: Author.
- Statistics Canada, & Human Resources and Skills Development Canada (HRSDC). (2005). *Building on our competencies: Canadian results of the International Adult Literacy and Skills Survey* (Cat. No. 89-617-XIE). Ottawa, ON: Author. Retrieved July 10, 2009, from <http://www.statcan.gc.ca/pub/89-617-x/89-617-x2005001-eng.pdf>
- Statistics Canada, & Organisation for Economic Co-Operation and Development (OECD). (2005). *Learning a living: First results of the Adult Literacy and Life Skills Survey* (Cat. No. 89-603-XWE). Ottawa, ON. Retrieved July 9, 2009, from <http://www.statcan.gc.ca/pub/89-603-x/2005001/4071714-eng.htm>
- Swanson, H. L. (1999). Components that predict treatment outcomes for students with learning disabilities: Support for a combined strategy and direct instruction model. *Learning Disabilities Research and Practice*, 14(3), 129-140.
- Tams, B. (2009, March). *Effective literacy programming in classroom environments*. Paper presented at the public consultation for the National Strategy for Early Literacy, Edmonton, AB.
- The Alberta Association of Optometrists. (2009). *Eye See... Eye Learn*. Retrieved July 21, 2009, from <http://www.optometrists.ab.ca/eye-see-eye-learn>
- The Boston Consulting Group. (2007). *Executive Summary Pathways*. Retrieved on August 18, 2009, from <http://www.pathwayscanada.ca/PDF/BCG.pdf>
- The Hearing Foundation of Canada. (2007). *Newborn hearing screening*. Retrieved July 21, 2009, from <http://www.thfc.ca/cms/en/ChildrenYouth/NewbornHearingScreening.aspx?menuid=106>
- Torgesen, J. K. (2004). *Preventing early reading failure*. Washington, DC: American Federation of Teachers. Retrieved July 21, 2009, from http://www.aft.org/pubs-reports/american_educator/issues/fall04/reading.htm
- Torgesen, J. K. (2009). The response to intervention instructional model: Some outcomes from a large-scale implementation in Reading First schools. *Child Development Perspectives*, 3(1), 38-40.
- Traxler, C. B. (2000). The Stanford Achievement Test, 9th edition: National norming and performance standards for deaf and hard-of-hearing students. *Journal of Deaf Studies and Deaf Education*, 5, 337-348.
- Vacca, J. (2007). Autistic children can be taught to read. *International Journal of Special Education*, 22(3), 54-61.
- Vaughn, W., Maples, W. C., & Hoenes, R. (2006). The association between vision quality of life and academics as measured by the College of Optometrists in Vision Development Quality of Life questionnaire. *Optometry*, 77, 116-123
- Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities as inadequate response to instruction: The promise and potential problems. *Learning Disabilities Research and Practice*, 18, 137-146.
- Weitzman, E., & Greenberg, J. (2002). *Learning language and loving it: a guide to promoting children's social, language, and literacy development in early childhood settings*. (2nd ed). Toronto: The Hanen Centre
- Willms, J. D. (2004a). *Reading achievement in Canada and the United States: Findings from the OECD Programme for International Student Assessment* (Cat. No. HS28-3/2004E). Report prepared for Human Resources Skills and Development Canada. Retrieved July 9, 2009, from <http://www.pisa.gc.ca/sst2E.pdf>
- Willms, J. D. (2004b). Variation in literacy skills among Canadian provinces: Findings from the OECD PISA. Ottawa, ON: Statistics Canada. Retrieved September 9, 2009, from <http://www.statcan.gc.ca/pub/81-595-m/81-595-m2004012-eng.pdf>
- Willms, J. D. (2002). *Vulnerable children: Findings from Canada's longitudinal study of children and youth*. Edmonton, AB: University of Alberta Press.
- Willison, M. (2009, March). *Improving school readiness*. Paper presented at the public consultation for the National Strategy for Early Literacy, Halifax, NS.

Appendix 1

Policy Research Papers Commissioned for the National Strategy for Early Literacy Initiative

Author and Affiliation	Title	Full text version available at:
Jessica Ball, Ph.D. University of Victoria	Aboriginal Young Children's Language and Literacy Development: Progress, Promising Practices and Needs	http://docs.cllrnet.ca/NSEL/Current/NSEL_Aboriginal08.pdf
Monique Brodeur, Ph.D. Éric Dion, Ph.D. Julien Mercier, Ph.D. Line Laplante, Ph.D. Université du Québec à Montréal Monique Bournot-Trites, Ph.D. University of British Columbia	Reading Skills Development: The Role and Education of Regular and Resource Teachers	http://docs.cllrnet.ca/NSEL/Current/NSEL_Role_TeachersEN.pdf
Canadian Council on Learning	Closing Canada's Rural/Urban Literacy Gap	http://docs.cllrnet.ca/NSEL/Current/NSEL_Rural_Urban08.pdf
Canadian Council on Learning	Literacy among Canadian Students with Disabilities	http://docs.cllrnet.ca/NSEL/Current/NSEL_Disabilities09_web.pdf
Canadian Council on Learning	Literacy among Canadian Students in Minority Language Contexts	http://docs.cllrnet.ca/NSEL/Current/NSEL_MinorityLanguage09.pdf
Alain Desrochers, Ph.D. University of Ottawa Victor Glickman, Ph.D. University of British Columbia	Reading Assessment Policy Research: Understanding Elementary Reading Assessment Options	http://docs.cllrnet.ca/NSEL/Current/NSEL_ElementaryReading.pdf
Fred Genesee, Ph.D. McGill University	Literacy Outcomes in French Immersion	http://docs.cllrnet.ca/NSEL/Current/NSEL_FrenchImmersion08.pdf
Esther Geva, Ph.D. Fatanah Farnia, Ph.D. Julie Byrd Clark, Ph.D. OISE/University of Toronto Alexandra Gottardo, Ph.D. Wilfred Laurier University	Children for Whom English/French is not their First Language	http://docs.cllrnet.ca/NSEL/Current/NSEL_FirstLanguage.pdf
Michelle Kozye, M.A. Linda S. Siegel, Ph.D. University of British Columbia	Canadian Provincial Policy Definitions of Learning Disabilities	http://docs.cllrnet.ca/NSEL/Current/NSEL_LearningDisabilities08.pdf
Ben Levin, Ph.D. OISE/University of Toronto	Large-scale Efforts to Improve Literacy	http://docs.cllrnet.ca/NSEL/Current/NSEL_LargeScaleEfforts08.pdf
Judith Maxwell Tatyana Teplova, Ph.D. CPRN	Canada's Hidden Deficit: The Social Cost of Low Literacy	http://docs.cllrnet.ca/NSEL/Current/NSEL_SocialCost08.pdf
Mike McCracken, M.A. Informetrica Limited T. Scott Murray, H.B.A DataAngel Policy Research	The Economic Benefits of Literacy: Evidence and Implications for Public Policy	http://docs.cllrnet.ca/NSEL/Current/NSEL_Economic_benefits.pdf
Janette Pelletier, Ph.D. OSIE/University of Toronto	The Role of Parents, Families and Caregivers in Young Children's Literacy Development: A Review of Programs and Research	http://docs.cllrnet.ca/NSEL/Current/NSEL_RoleOf08.pdf
Robert Savage, Ph.D. McGill University	Evidence-Informed Teaching Strategies for Improved Literacy Skills	http://docs.cllrnet.ca/NSEL/Current/NSEL_Evidence-based08.pdf
Monique Sénéchal, Ph.D. Carleton University	The Effect of Family Literacy Interventions on Children's Acquisition of Reading From Kindergarten to Grade 3	http://docs.cllrnet.ca/NSEL/Current/NSEL_Family_Literacy.pdf

Appendix 2

National Advisory Panel Members

1. Kim Crockatt, *Executive Director, Nunavut Literacy Council*
2. Margaret Eaton, *M.B.A., President, ABC Canada*
3. Leona Gadsby, *Director of Community and Adult Literacy, 2010 Legacies Now*
4. Roby Hochman, *M.Sc. (SLP), Vice President, Ontario Branch of the International Dyslexia Association*
5. Don Jamieson, *Ph.D., CEO and Scientific Director of Canadian Language and Literacy Research Network*
6. Robin McMillan, *Senior Consultant, Canadian Child Care Federation*
7. Penny Milton, *Chief Executive Officer, Canadian Education Association*
8. Sally Shearman, *B.Ed., Past President, Ontario Branch of the International Dyslexia Association*
9. Jennifer Starcok, *Managing Director, Canadian Language and Literacy Research Network*
10. Charles Ungerleider, *Ed.D., Director of Research and Knowledge Mobilization, Canadian Council on Learning*
11. Doretta Wilson, *B.A., Executive Director, Society for Quality Education*

Past members include:

1. Daniel Buteau, *Coordinator Elementary Secondary Division, Council of Ministers of Education*
2. Margo Fauchon, *Fédération canadienne pour l'alphabétisation en français*
3. Peter Hicks, *M.A., Executive Director, Strategic Analysis, Audit and Evaluation Branch, HRSDC*
4. April Kalyniuk, *Chair of Member Council, Canadian Child Care Federation, Lord Roberts Preschool*

Appendix 3

Panel Members: Canada-wide Public Hearings

1. Genevieve Boudreau, *L.L.M., Executive Director, Fédération provinciale des comités de parents*
2. Marie Bountrogianni, *D.Ed., President and Executive Director of the Royal Ontario Museum Governors, former Member of the Legislative Assembly of Ontario, Minister of Children's Services/Children and Youth Services and Minister of Citizenship and Immigration*
3. Peter Calamai, *B.Sc., Journalist, Director of ABC CANADA Literacy Foundation*
4. Jim Carr, *B.A., founding President and CEO of the Business Council of Manitoba, former Member of the Manitoba Legislature*
5. Hon. Sharon Carstairs, *M.A., The Senate of Canada*
6. Ken Chapman, *L.L.B., Lawyer and Founder of Cambridge Strategies Inc*
7. Jeff Dowle, *Canadian representative to the APEC Business Advisory Council and former Executive Vice-President of HSBC Bank and Chair of the Vancouver Board of Trade*
8. Janet Ecker, *ICD.D., President of the Toronto Financial Services Alliance, former Ontario Finance Minister*
9. Bruce Ferguson, *M.D., Director of the Community Health Services Resource Group at The Hospital for Sick Children*
10. Pierre-Gerlier Forest, *Ph.D., President of the Pierre Elliott Trudeau Foundation*
11. Jean Friesen, *Ph.D., University of Manitoba, former Member of the Manitoba Legislature: Minister of Intergovernmental Affairs, Deputy Premier*
12. Mary Jean Gallagher, *M.Ed. Chief Executive Officer, Literacy and Numeracy Secretariat, Ontario Ministry of Education*
13. Nick Geer, *F.C.A., Chair of NavCanada, former Chair and President of ICBC and Vice-Chair of the Pattison Group*
14. Gregory Gillis, *M.Sc., Senior Vice President Operations - Atlantic Canada and Quebec AMEC Earth & Environmental*
15. Wayne Helgason, *B.A., Chief Executive Officer, Social Planning Council of Winnipeg*
16. Myer Horowitz, *Ph.D., former President of the University of Alberta*
17. Linda Hughes, *B.A., Chancellor of the University of Alberta, former publisher of the Edmonton Journal*
18. Vania Jimenez, *M.D., Director, CSSS de la Montagne, Department of Family Medicine, McGill University*
19. Cal Johnston, *Retired Chief of the Regina Police Service*
20. René Legacy, *B.B.A., Vice President Communications and Strategic Planning, Fédération des caisses populaires acadiennes*
21. Gillian McCreary, *M.A., former Assistant Deputy Minister, Saskatchewan Departments of Education and Learning, former president of the Canadian Education Association*
22. T. Scott Murray, *H.B.A., President, DataAngel Policy Research Incorporated, former Director General, Social and Institutional Statistics, Statistics Canada*
23. Jim Mustard, *Fellow, Council for Early Child Development*
24. Edward Roberts, *L.L.B., former Lieutenant Governor of Newfoundland and Labrador*
25. William Robson, *B.P., M.A., President and Chief Executive Officer, C.D. Howe Institute*
26. Hon. Andy Scott, *P.C., B.A., Head of Social Policy Research Network at the University of New Brunswick, former Member of Parliament: Solicitor General, Minister of Indian Affairs and Northern Development*
27. Jim Sinclair, *President of the BC Federation of Labour*
28. Larry Smith, *B.C.L., President and Chief Executive Officer, Montreal Alouettes*
29. Robert Thibault, *Chief Administrative Officer, Richmond County, Nova Scotia, former Member of Parliament: Minister of State, Atlantic Canada Opportunities Agency and Minister of Fisheries and Oceans*
30. Hon. Marilyn Trenholme Counsell, *M.D., ONB, former Lieutenant Governor of New Brunswick, former Senator, The Senate of Canada*

Appendix 4

Submissions to Canada-wide Public Hearings

City: Winnipeg

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Tracy Lavin, *Ph.D., Canadian Council on Learning* - "Literacy among Canadian Students with Disabilities, Students in Minority Language Contexts and Students from Rural/Urban Areas"
3. Jan Roberts, *Ph.D., Medical Officer of Health, South Eastern Regional Health Authority* - "The South Eastman Experience"
4. Karen Guenther, *Seven Oaks Divisional Principal and Bright Futures Program Manager* - "Bright Futures Program"
5. Carol Goossen, *Family Literacy Consultant* - "Early Literacy"
6. Ken Chapman, *Cambridge Strategies, Inc.* - "The Economic Benefits of Literacy: Evidence and Implications for Public Policy"
7. Terrie Moar and Tricia Robinson, *Bookmates Inc.* - "Bookmates Inc"
8. Lucille Daudet-Mitchell, *Division scolaire franco-manitobaine* - "Living in French in Early Childhood and Learning in Francais Schools: Is there a Connection?"
9. George Fulford, *Ph.D., University of Winnipeg* - "The Special Education Crisis in Canadian Aboriginal Schools"
10. Strini Reddy, Melissa Sigvaldson, and Karen Botting, *Summer Learning Enrichment Program, Social Planning Council of Winnipeg* - "Community School Investigators (CSI): Summer Learning Enrichment Program 2008"
11. Joanne Dumaine, *Division scolaire franco-manitobaine* - "Parlons petite enfance"
12. Joanne Colliou, *Coalition francophone de la petite enfance du Manitoba*

City: Edmonton

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Sandra Irving and Kimberley Onclin, *Centre for Family Literacy* - "Literacy Develops in Families First"
3. Elaine Cairns and Sue Phillips, *The Further Education Society* - "Creating a Learning Culture for Canada"
4. Kathryn Burke, *Learning Disabilities Association of Alberta* and Brenda Martin, *Foothills Academy in Calgary* - "A Call to Action: Learning Disabilities in Canada"
5. Becky Kelley, *Bow Valley College* - "Early Learning and Child Care Programs"
6. Dariel Bateman, *Calgary Reads* - "Calgary Reads (An Early Literacy Initiative)"
7. Ken Chapman, *Cambridge Strategies, Inc.* - "The Economic Benefits of Literacy: Evidence and Implications for Public Policy"
8. Betty Tams and Laurie Beggs, *Edmonton Public Schools* - "Effective Literacy Programming in Classroom Environments"
9. Diana Villeneuve and Jean Ludlam, *Calgary Public Library* - "Calgary Public Library"
10. Sharilyn Cook, *Camrose Family Literacy* and Nola Sharp, *Children's Health and Mentorship Program; CHAMP* - "Alberta-Camrose and Area Family Literacy"
11. Dave Mason, *Edmonton Association of the Deaf* - "Improving Literacy Outcomes for Deaf Individuals"
12. Philip MacMillan, *Beacon Literacy Inc.* - "Beacon Literacy Inc."

City: Halifax

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Victor Glickman, *Ph.D., University of British Columbia* - "Criteria for the Evaluation of Reading and Assessment Tools"
3. Angela Reynolds, *Nova Scotia Public Libraries* - "Nova Scotia Public Libraries"
4. Erica Baker, *Ph.D., Registered Psychologist, Ann Krane & Associates Limited* - "Becoming an Advocate for Your Child"
5. Kristy Herron, *Digby County Family Resource Centre* - "Improving Literacy through Adult Education Programs"
6. Tracy Lavin, *Ph.D., Canadian Council on Learning* - "Literacy among Canadian Students with Disabilities, Students in Minority Language Contexts and Students from Rural/Urban Areas"
7. Cst. Greg Church, *RCMP, The Adopt a Library Literacy Program* - "The Adopt A Library Literacy Program"
8. Marjorie Willison, *Chebucto Communities Development Association* - "Improving School Readiness"
9. Will Fagan, *Ph.D., Memorial University* - "Parents' Roles Interacting with Teacher Support (PRINTS)"
10. Darrell Samson, *General Director of the Conseil scolaire acadien provincial of Nova Scotia* and Gisele Bourque, *Director of the Development of Preventative Intervention in Reading-Writing, Conseil scolaire acadien provincial of Nova Scotia*
11. Wayne MacDonald, *Ph.D., Clinical Neuropsychologist* - "Investigating Strategies for a Cost-effective Approach to Support Students with Literacy Difficulties"
12. Carol McDougall, *Read to Me! Nova Scotia Family Literacy Program* - "The Role of Early Literacy Programs in Literacy Outcomes"
13. Lynda Marsh, *Nova Scotia Family Literacy Advisory Group* - "A Comprehensive, Coordinated Approach Advances Early Childhood Literacy and Strengthens Parent Education"
14. Kay Desborough, *Mi'Kmaw Kina'Matnewey* - "Wellness through Literacy"

City: Fredericton

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Tim O'Neill, *Ph.D., Former Chief Economist at BMO Financial Group, Founder and Principal of O'Neill Strategic Economics* - "Canada Needs a Youth Literacy Strategy"
3. Doug Willms, *Ph.D., Canadian Research Institute for Social Policy, University of New Brunswick* - "Strategies to Improve the Literacy Skills of Canadian Children and Youth"
4. Jamie Irving, *The Telegraph Journal* - "Making the Case for a Literacy Institute"
5. Lynda Homer and Penelope Pacey, *Literacy Coalition of New Brunswick* - "Strategic Framework for Family Literacy in New Brunswick"
6. Mary Butler, *KSI Research International Inc.* - "Early Years Evaluation"
7. Katherine d'Entremont, *National Adult Literacy Database (NALD)* - "NALD and NALD@Work: Services provided by the National Adult Literacy Database"
8. Teresa Johnson, *New Brunswick Public Library Service* - "Improving Literacy in Rural New Brunswick"
9. Pam Whitty, *Ph.D., University of New Brunswick Early Childhood Centre* - "Provincial Curriculum Framework for Early Learning and Child Care"
10. Elizabeth Sloat, *Ph.D., University of New Brunswick* - "Creating a Coherent System of Childhood Education"
11. Andrea Bear Nicholas, *Chair in Native Studies, St. Thomas University* - "Increasing Literacy in Canada's Indigenous Peoples"
12. Sheelagh Callaghan, *Speech Language Pathologist, Talk with Me Program, Early Language Services* - "Talk with Me Program"
13. Gregory Gillis, *Senior Vice President Operations - Atlantic Canada and Quebec AMEC Earth & Environmental* - "Private Sector Involvement in Literacy Improvement"

City: Toronto

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Fataneh Farnia, *Ph.D., Hincks-Dellcrest Centre/OISE, University of Toronto* - "Children for Whom English/French is not their First Language"
3. T. Scott Murray, *President, DataAngel Policy Research Incorporated* - "The Economic Benefits of Literacy: Evidence and Implications for Public Policy"
4. Doretta Wilson, *Society for Quality Education* - "Systematic Phonics: An Alternative to Balanced Literacy"
5. Ken Settingington, *Toronto Public Library* - "Toronto Public Library's Commitment to Early Literacy"
6. Lita Barrie, *Canadian Association of Children's Libraries* - "Public Libraries: Opening Doors to Literacy"
7. Sharon List and Bill Hogarth, *York Region District School Board* and Jim Grieve, *Peel District School Board* - "Early Learning Initiatives in the Peel District School Board and the York Region District School Board"
8. Penny Milton, *Canadian Education Association* - "The Promise and Problem of Literacy for Canada: An Agenda for Action"
9. Mary Jean Gallagher, *CEO of the Student Achievement Division, Ministry of Education* and Carol Campbell, *Chief Research Officer, Ministry of Education*
10. Jo DeLuzio and Gary Malkowski, *Canadian Hearing Society* - "Canadian Hearing Society"
11. Kristin Snodden, *Canadian Cultural Society of the Deaf* - "Canadian Cultural Society of the Deaf"
12. Eileen Antone, *University of Toronto* - "Bringing Culturally Relevant Literacy to the Classroom"
13. Spider Jones, *Journalist and Broadcaster* - "The Reality of Illiteracy"
14. David Olson, *Ph.D., OISE, University of Toronto* - "Changing the View of Early Literacy"
15. Lisa Archibald, *Ph.D., University of Western Ontario* and Eleni Georgallidis, *Thames Valley District School Board* - "Working Memory to Increase Literacy Levels"
16. Heather Lotherington, *Ph.D., York University* - "Improving the Literacy Skills of Canadian Children and Youth"
17. Joanne Gross, *Remediation Plus System* - "Remediation Plus System"

City: Ottawa

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Monique Brodeur, *Ph.D., University of Montreal* - "Reading Skills Development: The Role and Education of Regular and Resource Teachers"
3. Lindsay Kennedy, *Movement for Canadian Literacy* - "A National Strategy to Improve Literacy"
4. Doug Willms, *Ph.D., Canadian Research Institute for Social Policy, University of New Brunswick* - "Strategies to Improve the Literacy Skills of Canadian Children and Youth"
5. T. Scott Murray, *President, DataAngel Policy Research Incorporated* - "The Economic Benefits of Literacy: Evidence and Implications for Public Policy"
6. Dorrie Morrow, *OD, Canadian Association of Optometrists, Children's Vision Initiative* - "The Children's Vision Initiative"
7. Carlos Pereira, *Early Childhood Education Faculty, Algonquin College* - "Changing College Curricula to Support Early Literacy"
8. Alexandra Gottardo, *Ph.D., Wilfred Laurier University* - "Children for Whom English/French is not their First Language"
9. Monique Sénéchal, *Ph.D., Carleton University* - "The Effect of Family Literacy Interventions on Children's Acquisition of Reading From Kindergarten to Grade 3"
10. Sheila Jenkins, *OttawaReads, Ottawa Centre for Research and Innovation* - "When OttawaReads...Everyone Benefits"
11. Judith Maxwell, *Canadian Policy Research Network* - "Canada's Hidden Deficit: The Social Cost of Low Literacy"

12. Barbara Clubb, *Ottawa Public Library* - "Promotion of Literacy as the Cornerstone of Library Services"
13. Jane Venus, *Children and Youth Services Committee of the Ontario Public Library Association* - "Awareness of Public Libraries as Supporters of Early Literacy"
14. Victor Glickman, *Ph.D., University of British Columbia* - "Criteria for the Evaluation of Reading and Assessment Tools"

City: Montreal

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Doug Willms, *Ph.D., Canadian Research Institute for Social Policy, University of New Brunswick* - "Strategies to Improve the Literacy Skills of Canadian Children and Youth"
3. Kim Murphy and Andrea Gingras, *Montreal Fluency Centre* - "The Gift of Reading"
4. Judith Poirier, *Fédération québécoise des organismes communautaires Famille* - "Deux actions indispensables pour arriver à hausser le niveau des littératies des jeunes canadiens et canadiennes"
5. T. Scott Murray, *President, DataAngel Policy Research Incorporated* - "The Economic Benefits of Literacy: Evidence and Implications for Public Policy"
6. Monique Brodeur, *Ph.D., Université du Québec a Montréal* - "Reading Skills Development: The Role and Education of Regular and Resource Teachers"
7. Rob Savage, *Ph.D., McGill University* - "Evidence-informed teaching strategies for improved literacy skills"
8. Rob Savage, *Ph.D., McGill University* - presenting on behalf of the Centre for the Study of Learning and Performance, Concordia University - "The Learning Toolkit"
9. Fred Genesee, *Ph.D., McGill University* - "Second Language Literacy Developments: Enhancing Bilinguality"
10. Penny Bloch, *Learning Associates of Montreal* - "Assessing and Treating Individuals with Learning Disabilities"
11. Vincent Gracco, *Ph.D., Centre for Research on Language, Mind and Brain* - "Literacy Research Funding in Canada: Meeting the Challenge: Reaping the Benefits"

City: Vancouver

Oral Presentations

1. Don Jamieson, *Ph.D., Canadian Language and Literacy Research Network* - "Overview of the National Strategy for Early Literacy Initiative"
2. Tracy Lavin, *Ph.D., Canadian Council on Learning* - "Literacy among Canadian Students with Disabilities, Students in Minority Language Contexts and Students from Rural/Urban Areas"
3. Victoria Purcell-Gates, *Ph.D., University of British Columbia* - "Increasing Literacy Levels of Canadian Students"
4. Leanne Conradie, *Speech Language Pathologist* - "Improving Literacy Skills in Canadian Children and Youth"
5. Mark Fettes, *presenting on behalf of the Faculty of Education, Simon Fraser University* - "A Critique and a Caution for NSEL"
6. Pat Holborn, *2010 Legacies Now* and Diana Twiss, *Literacy BC* - "Partnerships, Relationships, and Collaboration in Early Literacy"
7. Victor Glickman, *Ph.D., University of British Columbia* - "Criteria for the Evaluation of Reading and Assessment Tools"
8. Elizabeth Bredberg, *Ph.D., Research Director, Society for the Advancement of Excellence in Education (SAEE)*
9. David Mather, *Ph.D., University of Victoria* - "Writing Mislearning: A Review and a Recommendation"
10. Rhian Piprell, *Books for BC Babies/Coquitlam Public Library* - "Books for BC Babies"
11. Michelle Kozey, *University of British Columbia* - "Definitions of Learning Disabilities in Canadian Provinces and Territories"
12. Fataneh Farnia, *Ph.D., Hincks-Dellcrest Centre/OISE, University of Toronto* - "Children for Whom English/French is not their First Language"
13. Linda Jensen, *Langley School District* - "SummerLAND: A Summer Intervention Program"

Additional Submissions (written briefs not presented orally)

1. Tunya Audain, *Education Advisory, Vancouver, British Columbia*
2. Marilyn Barnes, *Hay River Literacy Society, Hay River, Northwest Territories*
3. Susan Bassili, *Chief SLP, Peel District School Board, Mississauga, Ontario*
4. Rebecca Boulter, *MLIS, PEI Public Library, Summerside, Prince Edward Island*
5. Mary Burke, *PEI Volunteers for Literacy, Charlottetown, Prince Edward Island*
6. Canadian Association of Speech-Language Pathologists and Audiologists, *Ottawa, Ontario*
7. Bonnie Chappell, *SLP, Phonetically Speaking, Edmonton, Alberta*
8. Dave Clyne, *Retired Teacher/Administrator, British Columbia*
9. Deirdre Crichton, *Parkland Regional Library, Yorkton, Saskatchewan*
10. Linda Hache, *Executive Director, Fédération d'alphabétisation du Nouveau-Brunswick, Bathurst, Nouveau-Brunswick*
11. Debra Harwood, *Ph.D., Faculty of Education, Brock University, St. Catharines, Ontario*
12. Rachel Heydon, *Ph.D., Faculty of Education, University of Western Ontario, London, Ontario*
13. Bev Jaremko, *Teacher, Calgary, Alberta*
14. Raymond Jean, *Enseignant aux adultes et bénévole à la Halte scolaire Séjour-Jeunesse, Pointe-Verte, Nouveau-Brunswick*
15. Jennifer Knudsen, *Brockville, Ontario*
16. Nancy Kondrat, *Early Literacy Consultant, Oakville, Ontario*
17. Guy Lanteigne, *CIPA, Paquetville, New Brunswick*
18. Sharon McWhirter, *Ontario Association of Speech-Language Pathologists (OSLA), Toronto, Ontario*
19. New Brunswick Association for Speech-Language Pathologists and Audiologists, *Moncton, New Brunswick*
20. Kelly Nolan, *Ph.D., Canadian Pediatric Society, Ottawa, Ontario*
21. K.K. Puri and Associates, *Canadian Rotographics Limited, Toronto, Ontario*
22. Red Deer Public Library, *Red Deer, Alberta*
23. Almaz Reda, *Home Instruction for Parent of Pre-school Youngsters (HIPPY), Toronto, Ontario*
24. Lorri Sauve, *Member, Action for Family Literacy Ontario, Toronto, Ontario*
25. Philip Taylor, *McGill University, Montreal, Quebec*
26. VOICE for Hearing Impaired Children, *Toronto, Ontario*
27. Paul Zimmerman, *Wake Forest University Health Sciences, Winston-Salem, North Carolina, USA*

**Réseau canadien de recherche
sur le langage et l'alphabétisation**



**CANADIAN LANGUAGE &
LITERACY RESEARCH NETWORK**

Partager la science. Éveiller les esprits.

sharing the science. opening minds.

Canadian Language and Literacy Research Network
at The University of Western Ontario
Elborn College, 1201 Western Road
London, Ontario N6G 1H1 Canada

Phone: 519.661.3619 Fax: 519.661.4223

www.cllrnet.ca

Report is available online at <http://docs.cllrnet.ca/NSEL/finalReport.pdf>

© 2009 Canadian Language and Literacy Research Network