TRENDS IN EARLY EDUCATON AND CHILD CARE

Kerry McCuaig, Atkinson Centre/UT
Jane Bertrand, MWMFF
Stuart Shanker, MEHRIT, York University

Atkinson Centre
for Society and Child Development

TRENDS IN EARLY EDUCATON AND CHILD CARE

Document Citation:
McCuaig, K., Bertrand, J., & Shanker, S. (2012). Trends in Early Education and Child Care. Toronto, ON: Atkinson Centre for Society and Child Development, OISE/University of Toronto.

Atkinson Centre for Society and Child Development, OISE/University of Toronto
www.oise.utoronto.ca/atkinson

Margaret and Wallace McCain Family Foundation
www.mwmccain.ca

MEHRI-T, York University
www.mehri.ca

TRENDS IN EARLY EDUCATON AND CHILD CARE

Kerry McCuaig, Atkinson Centre/UT Jane Bertrand, MWMFF, Stuart Shanker, MEHRIT, York University

Over the last few decades the science of early development has witnessed explosive growth. New technologies confirm that infancy and early childhood are the first and most critical phases of human development. A child's earliest experiences shape the structure of genes and the architecture of the developing brain. At the same time families have changed, becoming more diverse and are raising young children in circumstances that are significantly more complex, and for many, more stressful. Families and their needs have changed; the services designed to support them have not.

Closing the divide between early education and care

In much of Canada children's programming is divided into three distinct streams — education, child care, and family supports. All promote the healthy development of children as their primary goal yet they have no, or little, interaction. There are pockets of innovation and increased levels of investment, but service overlap prevails alongside large gaps. Each stream has its own bureaucracy, culture and mandate based on a narrow range of needs. The result is service silos. Children and families don't experience their lives in silos; their needs can't be dissected and addressed in isolation.

The Organization for Economic and Co-operative Development (OECD)[1] reports that Canada spends the lowest amount per child on early years programs among all the industrialized countries. As a result most Canadian children participate in universal preschool programs much later than their European counterparts and have the lowest rate of access to child care and intervention services.

The OECD review found that in jurisdictions where the policy and delivery of education, child care and related supports are divided, similar challenges prevail:

- Coverage is sparse.
- Not all families receive the services they are eligible for.
- Service location and affordability are barriers.
- Services hours and parents' work schedules often conflict.
- Families with multiple needs have difficulty fitting services together.
- Families lose needed services as children age or their circumstances change.

A great change is coming over childhood in the world's richest countries. Today's rising generation is the first in which a majority is spending a large part of early childhood in some form of out-of-home child care. At the same time, neuro-scientific research is demonstrating that loving, stable, secure, and stimulating relationships with caregivers in the earliest months and years of life are critical for every aspect of a child's development. Taken together, these two developments confront public and policymakers in OECD countries with urgent questions. Whether the child care transition will represent an advance or a setback – for today's children and tomorrow's world – will depend on the response.

The Child Care Transition,
UNICEF, 2008

[1] ***Starting Strong*** (2006). The OECD provides economic and social analysis for the governments of its member states. Starting Strong is the most comprehensive examination of early childhood education and care delivery ever undertaken. It took eight years to complete and involved 15 countries.

Service providers are also challenged.

- There is no on-going contact with families during their children's early years.
- Inflexible mandates and funding criteria leave providers unable to provide cohesive support.
- Services are funded on the basis of outputs rather than outcomes making it difficult to tailor services to families' diverse needs and circumstances.
- Services are typically treatment, rather than prevention or promotion-focused, and are unable to adapt to emerging needs.
- It is difficult to attract and retain qualified staff.

Improving outcomes for children requires a greater public commitment but new investments must be accompanied by smart decisions about program and system design if the transformative effects of investing in early childhood are to be realized.

CHANGING TRENDS IN THE GOVERNANCE OF ECEC

The OECD's review of ECE service delivery and the policy lessons derived from it, have influenced thinking around the world. Many jurisdictions are now taking steps to reduce the adverse effects of split systems by merging their early education and care frameworks.. Integrating systems takes high-level political commitment, stakeholder buy-in, the need to align programs for older children and adequate funding. The following table summarizes the common initiatives jurisdictions are taking to rationalize early childhood program delivery with the goal of enhancing access and quality.

Governance, administration, funding	Policy, goals, legislation, regulations	Early childhood workforce	Curriculum and pedagogy	Parent engagement
Establish a cross-ministerial unit in cabinet office to lead work	Set a clear vision/ strategy for 0-8 Design a framework / standards	Ensure professional training focused on ECD content	Learn from international examples	Make part of ECEC free with universal access
Merge & restructure existing functions into lead ministry	Set out a quality agenda	Narrow the qualification gap	Engage experts to advise on pedagogies	Lower age for compulsory schooling
Create ECE unit with specialists to lead work	Establish research, evaluation and monitoring systems for constant improvement	between ECEs & K-teachers	Develop a curriculum with clear goals	Set a ceiling/ cap on parent fees
Delegate/ ensure integration at the local level within a centrally developed framework	Reconcile goals between labour market, education and social policies	Institute strategy for ongoing professional development	Align ECE curriculum to facilitate children's transitions to school	Provide fee support for low income families
Earmark funding to improve quality, access	Align regulations for facilities, their use and oversight to create fewest transitions for children/families	Enhance ECE recognition	Seek sector input	Engage families through systems of democratic planning, evaluation

Chile, Finland, New Zealand, Norway, Scotland, Slovenia and Sweden are quite far along the integration route, taking steps to merge policy, regulations, funding, program, staffing and quality assurance functions. [2]

Target components	CHL	FIN	NZL	NOR	SCO	SLN	SWE
Policy, policy goals	Done	Done	Done	Done	Done	Done	Done
Administration	Done	Done	Done	Done	Done	Done	Done
Legal framework and regulations (teachers, buildings, hours, etc.)	Done	Done	Done	Done	Done	Done	Done
Funding	Done	Done	Done	Done	Done	Done	Done
Curriculum and pedagogy	Done	Done	Done	Done	Done	Done	Done
Quality assurance (inspections, monitoring, etc.)	Done	Done	Done	Done	Done	Done	Done
Teacher salaries	Done	Done	Done	Done	Done	Done	Done
Fees for parents	Done	Done	Done	Done	Intended	Done	Done
Teacher qualifications; teacher education and training	Done	Done	No plan	Done	Done	Done	Done
Delivery of services; joint location; age; staff/child ratio, etc.	Done	Done	No plan	Done	Intended	Done	Done
Others	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Lessons from New Zealand's ECEC integration experiences

One of the main lessons to be learned from New Zealand is the importance of making the structural change first. If childcare administration had not been moved to Education, many subsequent policies of significant benefit to infants, toddlers and young children would probably have applied only to children and services under the auspices of Education.

There has been a shift in attitudes amongst the public about the value of ECE that seems to emanate from Education departments being responsible for all ECE services. Attending an ECE centre is now accepted – it is what every child does. Parents are relaxed about using ECE services; there is no longer stigma or guilt about their children attending. Moreover, parents have changed their perception of ECE services. Improved documentation of learning, using socio-cultural assessment approaches (Carr, 2001), means that parents now come to see and know that learning starts in the early years, not when their child starts school. New entrants' teachers are noticing the deep learning that has been occurring in ECE services too.

Associated with both the shift in attitude, and the changing role of parents, there has been a shift in length of time children spend in ECE services and in the intensity of their participation – children start attending ECE services younger and they attend for longer hours. Policies to promote participation in all types of ECE services have drawn in populations that were under-represented in the past.

Anne Meade and Valerie N. Podmore, UNESCO Early Childhood and Family Policy Series, 2010, Caring and Learning Together: A Case Study of New Zealand. Pp. 37-39

[2] Miho Taguma, *Overview of country responses on Integrated Early Childhood Education and Care,* presented at 6th Meeting of the OECD Network on ECEC, 7 December 2009.

ECEC integration in Canada

Integration is a newer concept in Canada. The OECD noted our fragile patchwork of early childhood services and encouraged decision makers to "build bridges between child care and kindergarten education, with the aim of integrating ECE both at ground level and at policy and management levels" (OECD 2004, Canada Country Note. p. 6). Following the review, four provinces and two territories combined oversight for kindergarten and child care. Despite the 2007 cancellation of the federal/provincial early learning and care agreements most jurisdictions have actively reviewed their ECEC work. Even in the short period since the release of the Early Childhood Education Index in November 2011, much has evolved.

New Brunswick became the first jurisdiction with a legislative and regulatory framework combining oversight for education, child care, family supports and intervention services. Its 0 to 8 years strategy extends early interventions services into the primary grades. Child care and family support services districts now mirror those for schools and are overseen by the same regional directors.

Nova Scotia established an early years office in the Department of Education and has struck a blue ribbon panel to oversee province-wide consultations to renew its ECEC policies.

Ontario has released a discussion paper seeking sector/public input into new approaches to improve child care quality, oversight and access. Topics include how to extend the self-regulation approaches in its play-based Full Day Kindergarten curriculum, into programming for younger children.

Newfoundland has partnered with Memorial University to conduct a feasibility study of ECE integration and has instituted scheduled budget increases and tied child care operating funding to fees to contain parent costs.

PEI continues to build on its Preschool Excellence Initiative with the development of its new *Early Learning and Child Care Act* and the alignment of its preschool and kindergarten curriculum approaches supported by province-wide professional development for its ECE workforce.

British Columbia is preparing Play Resource for primary teachers that build on the provincial Early Learning Framework.

Saskatchewan is exploring a single integrated unit within Department of Education for its early childhood programs.

Alberta's Education and Human Services departments are working towards an ECEC framework. Grant McEwen University and Mount Royal University are developing a provincial curriculum framework.

The early childhood sector in Manitoba and British Columbia have formally proposed moving childcare into their respective education departments.

For more information about provincial/territorial ECEC policy developments see:
www.oise.utoronto.ca/atkinson/Resources/Policy_Monitor/index.html

Integrated Governance	NL	PE	NS	NB	QC	ON	MB	SK	AL	BC	NT
ECEC under common department/ministry	Under discussion	Y	Under discussion	Y	Y*	Y		Y			
Common ECEC supervisory unit		Y		Y		Y		Under discussion			
Common ECEC policy framework		Y		Y	Y		Y				
Common local authority for ECEC management and administration				Y		Under discussion					

*Quebec schools are responsible for out of school program for children 5-12 years old.

Modeling ECEC integration

To inform their early childhood integration efforts a number of jurisdictions developed small-scale models to inform processes and identify barriers. Some have since been scaled up into public policy. Toronto First Duty began as a partnership between the City of Toronto, the Toronto District School Board, Public Health and community partners. Elements, most specifically the unique teacher/ECE team, play-based curriculum and extended day programming options are now imbedded in Ontario's *Education Act* and govern the roll-out of full day kindergarten for all four-and five-year-olds.

Smart Start in PEI brought together CHANCES, a multi-site ECE and family support agency, with the school district, Holland College and the University of PEI. It's seamless program continuum from birth through to formal schooling informed the province's Preschool Excellence Initiative which is transforming a collection of private preschools into a publicly-managed ECE system.

New Brunswick's Early Childhood Development Centres model the coordinated delivery of childcare, family supports and special needs interventions from school settings. Their learnings are reflected in the new a three-year, $38-million action plan, *Putting Children First*, that

will integrate early childhood services into the school system.[3]

And the Kettle Stoney Point First Nations are collaborating with the Margaret and Wallace McCain Family Foundation and the Martin Aboriginal Education Initiative to combine their many programs and initiatives into a seamless birth to high school continuum of education and family supports. The chart to the right lists the elements used in the integrated model

.

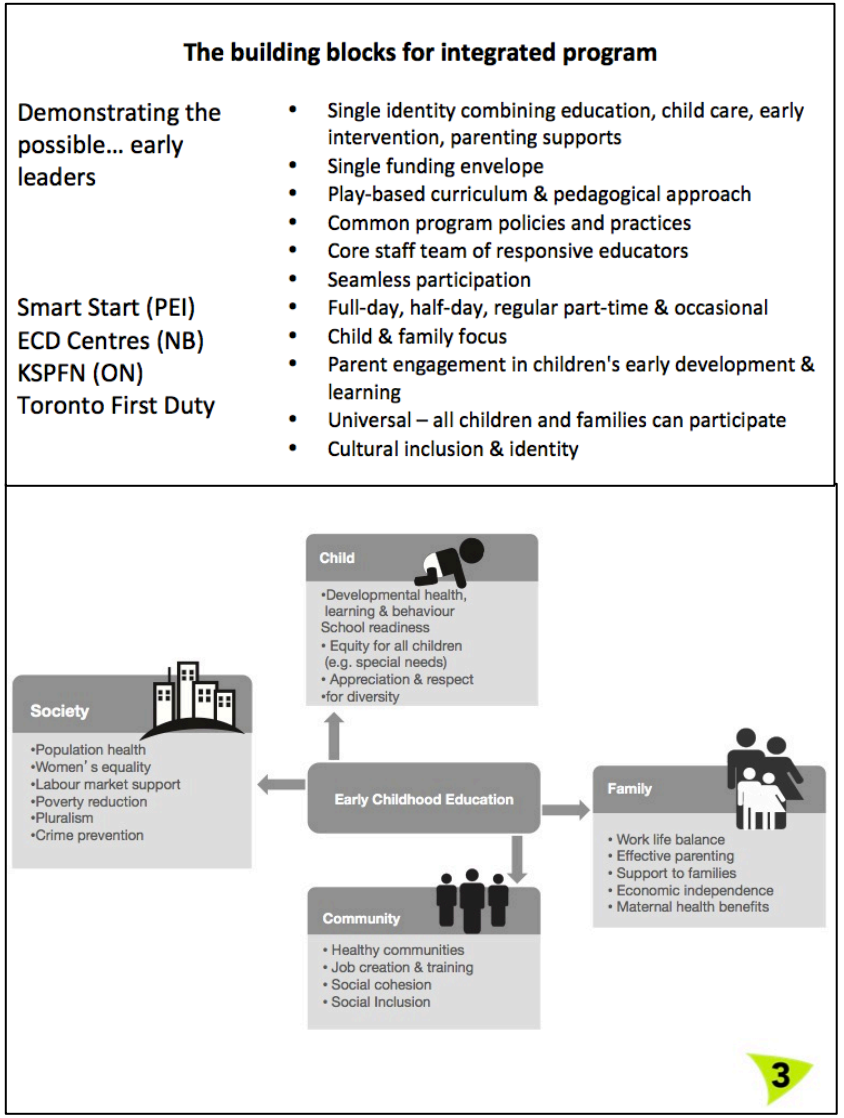
THE BENEFITS OF EARLY EDUCATION

A growing body of research recognizes that early childhood education programs improve children's well-being, help to create a foundation for lifelong learning and make learning outcomes more equitable. But early education has other benefits. It is a means of liberating mothers to go to work; reduces poverty; supports the productivity of the emerging labour force; is a preventive measure against future health and social costs and is an opportune time to intervene against inequalities that are passed down from generation to generation. Early education is also foundational for social cohesion and is an

indicator of a more just society.

Child rights

A more recent discourse, influenced by the UN Convention on the Rights of the Child (United Nations, 1989), argues for a child rights agenda as the firmest platform for developing ECEC policy. A child rights agenda within early childhood policies and practices is a relatively new concept, particularly in Anglo-American countries. It requires a paradigm shift in public and professional attitudes. Young children are no longer viewed as passive recipients of services, beneficiaries of protective measures, nor objects of social experiments. They are not the chattels of families, the clients of agencies nor are they capital for economic growth, but are in themselves fully human with capacities to communicate and contribute.



[3] www2.gnb.ca/content/gnb/en/news/news_release.2012.06.0506.html.

Respecting young children's rights challenges the deficit model of early interventions where children are identified by their problems and singled out for treatment. Rather the focus is on the child's assets. Parents are integrated into programs out of respect for the intimate knowledge they bring of their child. Communities are involved and celebrated for their values, traditions and sustainability.

Universal access to ECE

A child's right agenda is reflected in more universal approaches to ECE provision. Education is viewed to be an individual right which does not appear when children reach the age of compulsory schooling. Researchers and policy makers often argue that compelling need and scarce resources provides a rationale for targeting public ECE investment to children from disadvantaged homes. Poverty does increase children's chances of delayed development, but it is not the only factor. Most provinces determine children's readiness for school learning during kindergarten using the Early Development Instrument (EDI). Kindergarten teachers use the EDI to assess children on scales related to their social, emotional, cognitive and physical development. Country-wide data shows that more than one in four children arrive at kindergarten with vulnerabilities that make them more likely to fail in school.[4] Children who have trouble coping in kindergarten are less likely to graduate from high school or go on to post-secondary education. As adults they are more likely to fail in their personal relationships and have difficulties finding steady work. They are also more likely to become sick, addicted or depressed. Most vulnerable kids do not dwell in poverty; they live in middle-and upper-income households and neighbourhoods.[5]

The Andrews Street Family Centre enters its second decade as a locus of child and family services in the North end of Winnipeg. In developing the centre organizers canvassed the community asking members 'what could you contribute if our neighbourhood had a family centre?' A very different question from 'what can we do for you?" Andrews Street remains a community-gathering place "where those who often feel they have nothing to offer find a place to contribute…" (Annual Report 2010/11). Executive Director Dilly Knol says the model helps the centre avoid the high staff turnover that plagues programs in similar neighbourhoods. "The cynicism that emerges because you can't 'fix the client' doesn't overwhelm. Our families are well aware of their challenges; it's their strengths that we can shine a light on. This creates friendships not animosities".

(Personal communication).

It is difficult to attain the promised benefits of ECE investments without a universal outlook. Labour market enhancements, gender equity, poverty reduction, secondary school graduation rates and the economic benefits these bring do not occur without a critical mass of participation. Moreover a universal platform with specialized outreach to marginalized populations has been found to be more effective at reaching at-risk groups than targeted approaches, which are inevitably under resourced and vulnerable to shifting political priorities.

---

[4] Offord Centre for Child Studies. (n.d.). *School readiness to learn national SK cohort results: Based on the Early Development Instrument data collection for senior kindergarten students in Canada, Spring 2008.*

[5] Janus, M. & Duku, E. (2007). The school entry gap: Socioeconomic, family, and health factors associated with children's school readiness to learn. *Early Education and Development, 18*(3), 375–403.

A major challenge throughout OECD countries is the quality of ECE programming for disadvantaged groups. Programs for poor children become poor programs. Studies find that early learning classrooms comprised of about 60 percent of children from low-income homes were rated significantly lower in quality indicators of teaching, teacher–child interaction and provisions for learning than classrooms with fewer low-income children.[6] Conversely a British study found that children from poor families who went to preschool with middle class children did better than those who were educated in social and economic isolation.[7] The same result was found in a study of Georgia's universal preschool program. On reading and math tests, poor children did best in socially mixed classes.[8]

Poor children face a string of disadvantages that middle class children may not confront, but there is still room for concern. The learning gap between children from middle-income families and those born to the affluent is just as big as the gap that separates the middle and lower income groups. Middle class children, particularly boys,[9] drop out of school at alarming rates and with lifelong consequences.[10] Income doesn't inoculate children from learning disabilities or less than ideal home lives.

Self-regulation

Research is showing that self-regulation may be far more important than IQ in determining what kind of grades children achieve in school but how often they go to class, how much time is spent on homework, how aggressive they are, how vulnerable they are to risky behavior, or even how much time they spend watching TV or playing video games, says Dr. Stuart Shanker, Director, Milton & Ethel Harris Research Initiative, at York University.

Self-regulation is the ability to adapt one's emotions, behaviours, and attention to meet the demands of a given situation. It includes the ability to take into account one's own thoughts and those of others. Children acquire the capacity to self-regulate through relationships, first with parents and other primary caregivers and then with other children and adults.

---

[6] Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, D., & Barbarin, O. (2005). Features of pre-kindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interactions? *Applied Developmental Science, 9*(3), 144–159.

[7] Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2009). *Effective Pre-School and Primary Education 3-11 (EPPE 3-11) final report from the primary phase: Pre-school, school, and family influences on children's development during key stage 2 (age 7–11).* London, UK: Institute of Education, University of London.

[8] Ackerman, D., Barnett, S., Hawkinson, L., Brown, K. & McGonigle, E. (2009, March). Providing preschool education for all 4-year-olds: Lessons from six state journeys. *Preschool Policy Brief, 18.* New Brunswick, NJ: NIEER; Southern Education Foundation. (2008). *Time to lead again: The promise of Georgia pre-K.* Atlanta, GA: Author.

[9] Gilmore, J. (2010). *Trends in dropout rates and the labour market outcomes of young dropouts.* Ottawa, ON: Labour Statistics Division, Statistics Canada.

[10] Concordia University. (2010, November 16). Disadvantaged youth more likely to be high-school dropouts, young parents and poor adults. *ScienceDaily.*

Over the past decade, self-regulation has moved from an emerging concept to a central concept in understanding human development and learning. Individual disciplines often use a distinct lens on a particular aspect of self-regulation. Recent reviews of self-regulation research include studies on the physiological, cognitive, neurological, psychological and social dimensions of self-regulation as well as regulatory problems.[11]

Shanker synthesized the research across disciplines and identified five interconnected levels of self-regulation[12]:

- Biological (regulating arousal states),
- Emotional (monitoring and modifying emotional responses),
- Cognitive (sustaining and switching attention; inhibiting impulses; dealing with frustration, delay and distractions; and sequencing thoughts),
- Social (mastering rules of appropriate behaviour; and co--regulating with others), and
- Pro-social (especially empathy).

Early in life, environmental and biological factors shape the brain' architecture and contribute to the pattern and timing of development. The construction of the brain's circuitry begins soon after conception and proceeds in a predictable sequence beginning into adolescence. Increasingly complex skills and their underlying neural circuits build on the early developing skills and circuits. Early brain development reveals itself in a child's emerging social competence, emotional well-being, cognitive skills, language and physical abilities. All are connected to self-regulation.

The interconnections of the neural circuits formed in the limbic system and the prefrontal cortex interconnect:

- The neural circuits of the limbic system manage how we respond to challenges and stress and are under active construction before birth and in early life.
- The neural circuits of the prefrontal cortex underpin a suite of skills often called executive functions. These include working memory, ignoring distractions to stay on task, cognitive flexibility to shift focus, resolve competing demands, inhibit initial responses and understand the perspective of others. The construction of the prefrontal cortex circuitry is very active during the preschool period and continues through middle childhood, adolescent and early adulthood.

An individual's capacity to regulate arousal states is at the core of all levels of self-regulation. Arousal regulation is a continuum from asleep at one end to flooding or the inability to cope at the other end. Learning occurs best when a child is calm, focused and alert – an arousal state in the middle. A child is continually dealing with various levels of physical, emotional, cognitive and social stress that can make it difficult to attain or maintain this state and may lead to down-regulating and tuning out and becoming passive or up-regulating into tantrum level behaviour. Achieving and maintaining optimal self-regulation – a calm, focused and alert state – requires the capacity to make gradual but rapid changes to incoming stressors.

[11] Baumeister, R.F., Masicampo, E.J., & Vohs, K.D. (2011) Do conscious thoughts cause behavior? *Annual Review of Psychology, 62, 331-361*.
[12] Shanker, S. (2012) *Calm, Alert and Learning.* Toronto:ON; Pearson Canada

Unfortunately self-regulation is too often misinterpreted as the need to teach children self-control. There is a chasm between *self-regulation* and *compliance* between *being engaged* and *being obedient.* Generations of educators have used punishment and reward to keep children obedient. The problem is that a child who is only obedient because of fear of the consequences, or the anticipation of a reward, isn't developing the ability to cope with greater and greater challenges. Research tells us that the overuse of punitive measures to elicit compliance is a predictor of externalizing problems, while the overuse of rewards can have a dampening effect on motivation.[13]

Given rich opportunities for play however the child always behaves above his age and daily behavior gaining a greatly strengthened capacity for self- regulation Play, particularly make-believe play, is paramount in the early childhood context for the development of self-regulation. Make-believe play is rich in collaborative dialogues and development-enhancing consequences. As soon as children have the skills to engage in pretense, warm, involved adults can join in and scaffold their play. Through play preschoolers practice and solidify symbolic schemes. They master fears and anxieties, and as an avenue for exploring social roles, play helps them to gain skills and acquire culturally valued competencies.[14]

Culturally responsive programming

Diversity, equity, and inclusion are prerequisites for learning in early childhood programs. Children grow up with a strong sense of self in environments that support children's full participation and promote attitudes, beliefs, and values of equity and democracy. Preconceived notions about children's ethnocultural backgrounds, gender, ability, or socioeconomic circumstances create barriers that reduce engagement and equitable outcomes.[15]

---

[13] Afifi, T.O., Mota, N.P., Dasiewicz, P., MacMillan, H.L., Sareen, J. "Physical Punishment and Mental Disorders: Results From a Nationally Representative US Sample". Pediatrics peds.2011-2947; Taylor, C., Manganello, J.m Lee, S.J., Rice. J., "Mothers' Spanking of 3-Year-Old Children and Subsequent Risk of Children's Aggressive Behavior", *Pediatrics* peds.2009-2678; E. L. Deci, R. Koestner and R. M. Ryan, "A Meta-analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation," *Psychological Bulletin* 125, no. 6 (1999): 627-68, 692-700; M. R. Lepper, G. Sagotsky, J. L. Dafoe and D. Greene, "Consequences of Superfluous Social Constraints: Effects on Young Children's Social Inferences and Subsequent Intrinsic Interest," *Journal of Personality and Social Psychology* 42, no. 1 (1982): 51-65; A. Kruglanski, "Issues in Cognitive Social Psychology," *The Hidden Cost of Reward: New Perspectives on the Psychology of Human Motivation* (Lawrence Erlbaum, 1978).

[14] Florez, I. R., "Developing Young Children's Self-Regulation through Everyday Experiences". *Young Children,* (July 2011). NAEYC, Washington, DC.

[15] Bernhard, J., Freire, M., & Mulligan, V. (2004) Canadian Parenting Workshops. Toronto, ON: Chestnut. Center for Community Child Health. (2008a) Policy Brief No 11 2008: Rethinking the transition to school: Linking schools and early years services. Melbourne, VIC: Centre for Community Child Health. Robinson, K., & Diaz, C. (2006) Diversity and Difference in Early Childhood Education: Issues for theory and practice Bertkshire, England: Open University Press.

Traditional approaches to measuring successful learning for Aboriginal children have focused on the classroom and have not sufficiently reflected knowledge acquired through experiential learning, including learning from Elders, traditions, ceremonies, family, and the workplace.[16]

Aboriginal early childhood programs that are built on the culture of the families and community and controlled by First Nations contribute to the preservation of First Nations' culture.[17] Aboriginal and non-Aboriginal early childhood settings require programming that values Aboriginal languages and culture and is generated from the community rather than imposed on it.

It is one thing to know and value one's own culture. It is another to have others know and value it. In Canada, where it exists, Aboriginal content in preschool and school settings is targeted to Aboriginal children. New Zealand provides a different approach. Based on recognition of two founding peoples, the Māori and the colonists, and the need for a common understanding of the islands' history, traditions and values. New Zealand's preschool curriculum the *Te Whāriki/Early childhood curriculum (Ministry of Education, 1996)* (*Te Whāriki* translates from the Māori language as "a woven mat for all to stand on") has five strands that shape outcomes for children: Belonging – Mana Whenua, Well-being – Mana Atua, Exploration Aoturoa, Communication – Mana Reo, and Contribution – Mana Tangata.

The principles and strands of *Te Whāriki* were enshrined in legislation. (Amendment to the Education Act, 2008) Close connections have been developed between the curriculum framework, children's assessment, and processes for teachers' self-evaluations. Government-funded professional development helps educators to understand and promote socio-cultural learning.[18]

WHAT THE RESEARCH SAYS

ECEC as a foundation to academic learning and social competencies

- ***Effective Pre-School and Primary Education EPPE***

EPPE is the largest study in Europe on the effects of preschool education on children's intellectual and social and behavioural development The 3000 children in the study were randomly selected at age 3 from 141 preschool settings in England. At the core of the study is a developmental profile for each child, drawn from cognitive, language, social and behavioural assessments taken at ages 3, 5, 6, 7, 10 and 11. There was also a 'home' group with no preschool experience.

---

[16] Ball, J. (2008) Promoting equity and dignity for Aboriginal children in Canada IRPP Choices, 14:7 (June 2008). Canadian Council on Learning. (2007a) Redefining How Success is Measured in First Nations, Inuit and Métis Learning. Ottawa, ON: Canadian Council on Learning. Fearn, T. (2006). A Sense of Belonging: Supporting Healthy Child Development in Aboriginal Families. Toronto, ON: Best Start: Ontario's Maternal, Newborn and Early Childhood Development Research Centre.

[17] Greenwood, M. (2006) Children Are a Gift to Us: Aboriginal- Specific Early Childhood Programs and Services in Canada. Canadian Journal of Native Education 29 (1): 12-28; Native Council of Canada. 1990. Native Child Care: The Circle of Care. Ottawa: Native Council of Canada.

[18] Meade & Podmore (2010)

The longitudinal design of the study provides sound evidence on the impact of different types and amounts of preschool provision after taking into account children's characteristics and their home background.
Key findings include:

- Although parents' social class and levels of education were related to child outcomes, the stimulation provided in the child's early home learning environment was an even more important influence.
- Children who attended preschool made more cognitive and social/behavioural progress compared to those who remained at home.
- Both quality and duration of preschool are important for children's development. Every month of preschool after age 2 is linked to better cognitive development and improved independence, concentration and sociability.
- Case studies showed that children made better progress in preschools that viewed educational and social development as complementary.

A similar study in Northern Ireland showed children who attended high quality pre-schools were 2.4 times more likely in English, and 3.4 times more likely in mathematics, to attain the highest grade at age 11 than children without pre-school.

EPPE concludes that three elements lead to educational success:

- Good home learning environment
- Good pre-schools for longer duration
- Good primary schools

Those children with all 3 will out-perform those with 2 who will out-perform those with 1 who will out-perform those with none, all other things being equal.[19]

Nested within the broader EPPE study was an examination of the effect of preschool settings on, 'at-risk' or vulnerable children requiring Special Educational Needs (SEN) during preschool or upon entry to school. Findings show correlation between resilience during school years and self-regulation at school entry. Self-regulation in turn was highly linked to the quality of the preschool environment. [20]

---

[19] Siraj-Blatchford I. and Siraj-Blatchford J. (2009) *Improving Children's Attainment through a Better Quality of Family-based Support for Early Learning,* London, Centre for Excellence and Outcomes.
Siraj-Blatchford, I., Sylva, K., Taggart, B., Sammons, P., Melhuish, E.C. & Elliot, K. (2003) *The Effective Provision of Pre-school Education (EPPE) Project: Technical paper 10 – Intensive case studies of practice across the foundation stage,* London, DfES/Institute of Education
Sylva, K., Melhuish, E.C., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2004) *Provision of Pre-school Education (EPPE) Project: Final report,* London, DfES/Institute of Education.

[20] Anders, Y., Sammons, P., Taggart, B.; Sylva, K., Melhuish, E. & Siraj-Blatchford, I. (2011). The influence of child, family home factors and pre-school education on the identification of special educational needs at age 10 . *British Educational Research Journal*, 37, 421-441.

- ***NICHD Study of Early Child Care (US)***

The NICHD followed 1,300 children across the U.S. from birth, through their preschool years into adolescence. It found that higher quality childcare was linked to:

- better pre-academic skills
- better language skills

Conversely children's experiences in low quality centres were linked to more problem behaviors. The more hours spent in poor childcare the more problems.[21]

- ***National Child Development Study (NCDS)***

The study examined the effect of pre-school on a random sample of children born in 1958 in the UK. Controlling for child, family and neighbourhood, the study found long-lasting effects from participation including better cognitive scores at 7 and 16 years. In adulthood, pre-school was found to increase the probability of good educational qualifications and employment at age 33, and better earnings at age 33.[22]

- ***PISA results for 2009***

PISA is an international assessment of the reading, science and mathematical literacy of 15-year-old students in OECD countries. It takes place in 3-year cycles, monitoring changes in student achievement and other features of the education system over time. The 2009 results showed 15-year-olds who had attended preschool were on average a year ahead of those who had not. PISA also suggests that preschool participation is strongly associated with reading at age 15 in countries that sought to improve the quality of pre-school education and provide more inclusive access to pre-school education.

The relationship between pre-school and performance at age 15 is strongest when:

- A larger percentage of the population can use pre-school
- Duration is two or more years prior to compulsory schooling
- Preschools have smaller pupil-to-teacher ratios
- More per child is spent on preschool

[21] Vandell, D., Belsky, J., Burchinal, M., Steinberg, L., Vandergrift, N., & the NICHD Early Child Care Research Network. (2010). Do effects of early child care extend to age 15 years? Results from the NICHD Study of Early Child Care and Youth Development. *Child Development, 81*(3), 737-756.

[22] Goodman & Sianesi (2005). Early education and children's outcomes: How long do the impacts last? Fiscal Studies, 26, 513-548. http://www.ifs.org.uk/docs/ee_impact.pdf

The OECD's report on PISA results concludes: "The bottom line: Widening access to pre-primary education can improve both overall performance and equity by reducing socio-economic disparities among students, if extending coverage does not compromise quality."[23]

In France, free school was made available to children for age 3 years starting in the 1960s. Almost all children attend beginning at age 3. Analysis showed preschool:

- Leads to higher income in later life
- Reduces socio-economic inequalities
- Children from less advantaged backgrounds benefit more from preschool than those from advantaged background

Duration matters: In all income groups, children who attended for three years did better than those attending for two, who did better than those attending for one year. [24]

- ***Selected examples of meta-analysis reviews linking ECE to cognitive and social development***

Study	Methodology	Findings
Burger, K. (2010). How does early childhood care and education affect cognitive development? An international review of the effects of early interventions for children from different social backgrounds. *Early Childhood Research Quarterly, 25(2),* 140-165.	Systematic review to assess the effects of various preschool programs on cognitive development and impact for children from different social backgrounds. Randomized trials are generally conducted with small samples and at single site only. Majority of studies have a quasi-experimental design that investigate the impact of naturally occurring variations in different types of interventions. Birth cohort studies and large-scale representative surveys provide data on a wide range of information. Typically compare children who have experienced some form of early intervention to those with none, while trying to control for other important background characteristics that could influence development.	Program intensity, and duration were considered. The findings indicate that the vast majority of recent early education and care programs had considerable positive short-term effects and somewhat smaller long-term effects on cognitive development and that in relative terms children from socioeconomically disadvantaged families made as much or slightly more progress than their more advantaged peers. Despite benefits, early childhood education and care cannot entirely compensate for developmental deficits due to unfavorable learning conditions in disadvantaged milieus.
Camilli, G., Vargas, S, Ryan, S., & Barnett, S. (2010) Meta-analysis of the effects of early education interventions on cognitive and social development. *Teachers*	A meta-analysis of 123 comparative studies of early childhood education interventions. Each study provided a number of contrasts, where a contrast is defined as the comparison of an intervention group of children with an alternative intervention or no intervention group.	*S*ignificant effects were found in this study for children who attend preschool prior to kindergarten. Although the largest effect sizes were observed for cognitive outcomes, preschool (regular part-time and full-time delivery) was also found to impact children's social skills and school progress.

[23] Pisa in Focus 2011/1: Does participation in pre-primary education translate into better learning outcomes at school? Paris: OECD. www.pisa.oecd.org.dataoecd/37/0/47034256.pdf

[24] OECD Country Note, *Early Childhood Education and Care Policy in France.* Directorate for Education, OECD February 2004.

College Record. 2010		Specific aspects that positively correlated with gains included teacher-directed instruction and small-group instruction, but provision of additional services tended to be associated with negative gains. A host of original and synthetic studies have found positive effects for a range of outcomes, and this pattern is clearest for outcomes relating to cognitive development.
Barnett, S. (2010) Universal and targeted approaches to preschool education in the United States. *International Journal of Child Care and Education Policy*, Volume 4, Number 1	Meta-analysis are based on the results of 120 studies carried out over five decades. Comparison of the current targeted approach to the universal provision of preschool.	Substantial positive cognitive benefits for all children who attend preschool prior to entering kindergarten. Positive results were also found for children's social skills and school progress. Conclusion that universal public preschool education would reach more children in low-income families, as well as children from middle- and higher-income families, and might actually improve program effectiveness, particularly through peer effects. While a universal approach would cost more than a targeted approach, it is likely to produce benefits that exceed the additional costs.
Gorey, K. (2001) Early childhood education: A meta-analytic affirmation of the short- and long-term benefits of educational opportunity. *School Psychology Quarterly,* Vol 16(1), 2001, 9-30.	Meta-analysis of effectiveness of early childhood educational program studies. Integrated results across 35 preschool experiments and quasi-experiments,	Preschool effects on standardized measures of intelligence and academic achievement were statistically significant, positive, and large. Cognitive effects of relatively intense educational interventions were significant and very large, even after 5–10 years, and 7–8 of every 10 preschool children did better than the average child in a control or comparison group. Cumulative incidences of an array of personal and social problems were statistically, significantly, and substantially lower over a 10- to 25- year period for those who had attended preschool (e.g., school drop out, welfare dependence, unemployment, poverty, criminal behavior).

Economic benefits of ECE

Early childhood education is economic development, and the research shows it is economic development with a very high public return. The economic rationale for investing in early childhood programming is gathered from three types of analyses: longitudinal data quantifying the human capital benefits and reduced health and social costs for children who attend preschool; economic modelling forecasting the payback from the enhanced labour productivity of working mothers; and studies examining the early childhood sector itself and its multiplier effects on economies.

- ***ECE as human capital development***

Validation of the human capital approach is heavily influenced by three U.S. longitudinal studies on the impact of preschool education on children from disadvantaged backgrounds. The participants were largely African-American children deemed to be at-risk because of low family income, mothers' age, educational attainment and lone-parent status and neighbourhood livability.

Ypsilanti's Perry Preschool (initiated in 1962), the Abecedarian study in North Carolina (1972) and the Chicago Child-Parent Centers (1967) have tracked their original cohorts for up to four decades. Each study was unique, but all provided a group program emphasizing parent involvement and the development of literacy skills. Child-to-staff ratios were low and educators had university level training in early childhood education.

Assessed over time, the preschool groups showed greater on-time secondary school graduation, higher college attendance, increased earnings and more prosocial conduct as adults compared to the control groups. For children born to mothers who never finished high school, high school completion rates were roughly 10 percent higher and rates of substance abuse and felony charges were roughly 10 percent lower than for children in the studies who did not attend preschool. The outcomes were particularly pronounced for male participants.[25] No long-term effect was found on the IQ of the participants, but preschool did help children develop better cognitive habits and improved impulse control.

FIGURE 4.1 **Cost-benefit findings from three major longitudinal studies involving disadvantaged children attending preschool in U.S. urban areas**

	Abecedarian	Chicago Child-Parent Centers	Perry Preschool
Year began	1972	1967	1962
Location	Chapel Hill, NC	Chicago, IL	Ypsilanti, MI
Sample size	104	1,539	123
Intervention group	50	1,286	58
Design	Random control	Children who only attended full-day kindergarten	Random control
Participants' ages	6 weeks–5 years and 6–8 years	Ages 3–9 years	Ages 3–4 years
Program schedule	Full-day/year-round	Half-day/school year	Half-day/school year
Average time in program per child	5 years	18 months	2 years
Additional interventions to preschool	• Enriched programming in elementary grades • Health and family supports	• Full-day kindergarten • Health and family supports • Enriched programming in early elementary grades	• Health supports • 1.5 hour home visit once a week
Age last assessed	21 years	28 years	40 years
Costs per child	$13,900/yr	$7,428/child	$15,166/yr
Benefits calculated	$143,674	$83,511	$258,888
Return on each $1 spent	$4:$1	$10:$1	$17:$1

Sources: Barnett, W. S., & Masse, L. N. (2007); Schweinhart, L. J., et al. (2005); Temple, J. A. & Reynolds, A. J. (2007); Reynolds, A. J., Temple, J. A., Ou, S., et al. (2011).

[25] Reynolds, A. J., Temple, J. A., Ou, S., Arteaga, I. A., & White, B. A. B. (2011). School-based early childhood education and age-28 well-being: Effects by timing, dosage, and subgroups. *Science, 333*(6040), 360–364. Retrieved from http://www.sciencemag.org/content/333/6040/360

The Chicago and Abecedarian studies included samples of children who attended both preschool and enriched school programming. Others participated only in preschool, or only in enriched schooling. The most consistent and enduring outcomes were from preschool participation. School-aged programming provided added academic and earning advantages, but social behaviours were not appreciably different from the preschool-only groups.

The benefits of preschool were quantified by comparing the original costs of the program per child to their adult behaviour, including employment earnings, taxes paid, social welfare used and criminal justice costs incurred. Only the financial returns for participants as they entered youth and adulthood were considered by the studies, not modifications in their parents' behaviour. In the Abecedarian study, for example, all-day preschool made it possible for parents to work or upgrade their skills. Parental benefits from lowered welfare use and increased tax revenues paid were not factored into the results, nor were more immediate benefits accruing to the child, such as reduced demand for health care or special education.

Canadian Cost-Benefit Analyses of ECEC

The first Canadian analysis of the economic payoffs of preschool came in 1998 when economists calculated the impact of providing publicly funded educational child care for all children aged 2–5 years.[26] The net cost of $5.2 billion annually (1998 CDN dollars) was premised on an overall parental contribution of 20 percent, with individual fees scaled to income.

The authors determined the benefits at $10.6 billion. About $4.3 billion was foreseen for children in improved school readiness, graduation levels and future earnings. The majority, and the most immediate, dividends ($6.24 billion) went to mothers. Affordable, available child care would allow women to work, to shorten their stay out of the labour market following the birth of their children and would permit them to move from part-time to full-time work. This would afford women more financial independence, increasing their lifetime earnings and decreasing their chances of poverty at the time of divorce or widowhood.

- ***Better Beginnings, Better Futures***

Canada's largest study on the influence of programs on children is Better Beginnings, Better Futures (BBBF). BBBF looked at eight communities, five focused on children from birth to 4 years of age (the younger child sites), and the other three on kindergarten aged children to 8 years of age (the older child sites). Sites received a grant averaging $580,000 each year over five years (1993–97) to enrich programming for children, parents and/or neighbourhoods. Each site selected its own interventions, which varied over the course of the study.

A sample of children from each site was selected to study the impact of the interventions at a community level. Long-term positive effects

[26] Cleveland, G., & Krashinsky, M. (1998). *Benefits and costs of good child care: The economic rationale for public investment in young children.* Toronto, ON: Child Care Resource and Research Unit, University of Toronto.

were found for the children who lived in communities with enriched programming for 4- to 8-year-olds, but not for those in the younger child site communities. The positive outcomes actually strengthened over time in the older child sites, as seen in measures collected when children were in grades 3, 6, 9 and 12. Children in the BBBF communities used health, special education, social services, child welfare and criminal justice services less than those in the control neighbourhoods. The reduction in the use of special education services alone saved more than $5,000 per child by grade 12. Overall, government funders realized a cost-benefit of more than $2 for each $1 invested in the project.[27] The benefits are dramatic because they are recouped during childhood and represent benefits that accrue at a community level, and therefore have direct application for policies that are scaled up.

Why did younger children receive no lasting benefits from the interventions, while older children did? One explanation is that the modest project investment per child did not provide enough intensity for younger children.[28] Program spending in the older children's sites was on top of investments already made for every child via the school system. Schools offered a universal platform so that enriched supports reached all children, while no equivalent service is available for children during their preschool years.

- ***ECE as local economic development***

ECE plays a multifaceted role in a regional economies: as an economic sector in its own right with facilities, employees and consumption from other sectors; as labour force support to working parents; and for the long-term economic impact it has on the next generation of workers.[29] Prentice (2004, 2007) analyzed the economic impact of Winnipeg's 620 child care facilities. She found that for every child care job, 2.15 others were created or sustained. Child care also allows mothers and fathers to work. Parents with children in child care earn an estimated $715 million per year.[30] Overall, every $1 invested in child care provided an immediate return of $1.38 to the Winnipeg economy, and $1.45 to Canada's economy.

In 2007, Prentice also analyzed the child care sector in a rural, northern and Francophone region of Manitoba. Those studies identified higher returns, with every $1 of spending producing $1.58 of economic effects. In contrast to the Winnipeg report, Prentice found a lower employment multiplier: every two child care positions created 0.49 other jobs.[31]

---

[27] Peters. R.D., Nelson, G., Petrunka, K., Pancer, S.M., Loomis, C., Hasford, J., Janzen, R., Armstrong, L., Van Andel, A. (2010). *Investing in our future: Highlights of Better Beginnings, Better Futures Research findings at Grade 12*. Kingston, ON: Better Beginnings, Better Futures Research Coordination Unit.

[28] Corter, C., & Peters, R. D. (2011). Integrated early childhood services in Canada: Evidence from the Better Beginnings, Better Futures (BBBF) and Toronto First Duty (TFD) projects. In R. E. Tremblay, R. G. Barr, R. D. Peters, & M. Boivin (Eds.), *Encyclopedia on Early Childhood Development*. Montreal, QC: Centre of Excellence for Early Childhood Development.

[29] Prentice, S., & McCracken, M. (2004). *Time for action: An economic and social analysis of childcare in Winnipeg.* Winnipeg, MB: Child Care Coalition of Manitoba.

[30] Ibid.

[31] Prentice, S. (2007a). *Franco-Manitoban childcare: Childcare as economic, social, and language development in St.Pierre-Jolys*. Winnipeg, MB: Child Care Coalition of Manitoba; Prentice, S. (2007b). *Northern childcare: Childcare as economic and social development in Thomson.* Winnipeg, MB: Child Care Coalition of Manitoba; Prentice, S. (2007c). *Rural childcare: Childcare as economic and social development in Parkland.* Winnipeg, MB: Child Care Coalition of Manitoba.

- ***ECE as economic stimulus***

Released on the heels of the 2008 collapse of the financial markets when governments were looking for stimulus projects, economist Robert Fairholm showed how investing in educational child care was a hands down winner:

- **Biggest job creator:** Investing $1 million in child care would create at least 40 jobs, 43 percent more jobs than the next highest industry and four times the number of jobs generated by $1 million in construction spending.
- **Strong economic stimulus:** Every dollar invested in child care increases the economy's output (GDP) by $2.30. This is one of the highest GDP multipliers of all major sectors.
- **Tax generator:** Earnings from increased employment would send back 90 cents in tax revenues to federal and provincial governments for every dollar invested, meaning investment in child care virtually pays for itself.

Fairholm's work also quantified the immediate costs of the sector's poor employment environment, which results in annual shortages of about 50,000 educators. The net cost to the Canadian economy was estimated at over $140 million for the period 2001 to 2007. The shortage of educators also held parents back from entering the workforce. In total, it meant a loss of almost 50,000 person years of employment. The study concludes that investments in early childhood programming pay for themselves, in both the immediate and longer-term, with a $2.54 payback for every dollar spent after accounting for all benefits and costs over the immediate to longer-term.[32]

- ***Quebec's no cost ECE strategy***

Quebec's low cost early childhood and after-school services ($7/day) are attended by approximately 65 per cent of Quebec children 0-12 years of age. Economics Pierre Fortin's analysis of Quebec's system focuses on the economic impacts due to changes in the mothers' labour force behavior. His work determines:

- Who is working because low cost child care is available?
- How much tax revenue are they bringing in?
- How much less are they drawing on income-tested family benefits?

Fortin's analysis found that in 2008, 70,000 more Quebec women were at work and their presence could be attributed to low cost preschool.

[32] Fairholm, R. (2009) Literature review of socioeconomic effects and net benefits of ECEC labour market – Understanding and addressing workforce shortages in early childhood education and care (ECEC) project, Ottawa, CA: Child Care Human Resources Sector Council.
Fairholm, R (2009) Estimates of workforce shortages – Understanding ad addressing workforce shortage in early childh education and care (ECEC) project, Ottawa, CA: Child Care Human Resources Sector Council.
Fairholm, R., Davis, J. (2010) Early learning and care impact analysis, for the Atkinson Charitable Foundation.

This meant a 3.8 percent boost in women's employment, and a 1.8 percent increase in total provincial employment. Adjusting for hours of work and the productivity of the new entrants, he calculated their labour added 1.7 percent to Quebec's GDP. Quebec mothers paid $1.5-billion annually in taxes and because their earnings raised their family income, they were entitled to lower levels of income-tested government transfers and credits, with both the federal and Quebec governments benefitting.

Overall Fortin estimated that for every public dollar spent on ECEC, the Quebec government gets back $1.05 in increased taxes and reduced family payments, while the federal government gets 44 cents for, in Fortin's words, "doing nothing." Fortin's analysis also challenges claims that Quebec's early years investments would be better targeted to low-income families. While not discounting that better efforts could be made to facilitate the inclusion of children from disadvantaged circumstances, Quebec has a greater percentage of children from low-income homes attending preschool than any other province, including provinces where public funding is solely targeted to the poor. Moreover, he shows that restricting the access of moderate- and middle-income families would limit their abilities to earn income, reduce their tax contributions and add to their benefit claims, removing an important source of government revenue for social spending.[33]

CONCLUSION

Creating an early childhood system linked to public education was introduced in *Early Years Study 2* (2007). Since then many reports have envisioned children entitled to rich educational opportunities from birth. Building on the tremendous assets Canadians have in our public education systems, they argue for the transformation of elementary schools into child and family centres, welcoming infants to adolescents and operating year-round. Getting there requires saying goodbye to legislative, administrative and funding silos, and leaving territorial and professional jealousies behind. All the elements exist in the hodgepodge of child care, public health, education and family support services to create a *system* that can that can contribute to children's happiness and our collective futures.

Why has the early childhood community failed to persuade governments of the compelling case for public investment?

We have lacked clear leadership to advocate vigorously for the consolidation of early childhood policies, to overcome the current fragmentation of public and private budgets between countless institutions, none of which take a sufficiently holistic view of children. We must move from mere activism to strategic mobilization. We must identify and assist stakeholders from different sectors with the will and the ability to represent the interests of children, particularly the poorest and most excluded.

Leonardo Yánez. "Quality learning at scale: a new goal for the Bernard van Leer Foundation*," Early Childhood Matters,* Bernard van Leer Foundation, November 2011. P.1.

[33] Fortin, P. Godbout, L., St-Cherny, S. Impact of Quebec's universal low fee childcare program on female labour force participation, domestic income, and government budgets. Mai 2012, Working Paper 2012/02, Universite de Sherbrooke.