ECD
COUNCIL FOR EARLY CHILD DEVELOPMENT

EARLY YEARS STUDY 2: PUTTING SCIENCE INTO ACTION

SUMMARY

Chapter One: The Long Reach of Early Childhood

A familiarity with what is known about how the brain develops allows us to understand how early environments can be structured to improve early and later outcomes. Neurons are the basic building blocks of the brain; based on genes and experience, neurons are connected to form networks. Networks that are underdeveloped are pruned. As each stage of the brain's development rests on another, everything in the infant environment contributes to brain development—noise, light, and changes in temperature; in the touch, voice, and smell of her caregiver.

Building pathways for learning and health: Experiences in early life activate gene expression and result in the formation of critical pathways and processes. One of the most dramatic discoveries in molecular biology over the past generation involves the interplay between early experiences and how, where, and when genes work. Epigenetics is the study of how genes can be turned on or off by environmental factors. In short, genes need nurturing.

Social economic status (SES) is a hierarchical structure representing wealth, power, and prestige. SES is associated with social and developmental outcomes: people with low SES tend to have poor outcomes; those with high SES are more likely to have good outcomes. Numerous health problems are related to early life, including coronary heart disease, obesity, and substance addictions. Also related are behaviour problems, such as ADHD and autism.

To be successful, programs must be universal: Vulnerable children are found in all SES groups but populations are not evenly distributed between groups. Restricting programs to vulnerable children in the low SES group therefore misses the majority of children—those in the middle SES groups—experiencing difficulties.

Wealth does not equal health: It is not wealth, but equality that produces healthy populations. Consistently, countries demonstrating high health and literacy outcomes show a fairly flat socioeconomic gradient. Countries with healthy, more literate populations, invest heavily in young children and their families.

Perry Preschool Study: From 1962-1967, 123 subjects born in poverty were randomly divided up, at ages 3 and 4, into two groups. The first group received a high-quality preschool and weekly home visits, while the comparison group received no interventions. Data has been gathered on the participants over the intervening years. The latest analysis comes from interviews with the subjects at age 40 (97% are still alive), with additional data gathered from school, social services, and arrest records. The sample attending preschool significantly outperformed the no-program group. The study includes a cost/ benefit analysis. Figure 1.16 illustrates the program's cumulative economic return to society: $258,888 per participant on an initial investment of $15,166 per child, or a $17.07 return on each dollar spent (a better return than any stock investment). By today's standard, Perry Preschool is a late intervention study. Outcomes are more pronounced for quality programs started in pregnancy or at birth.

The results from these and other studies are compatible with the evidence from the biological and neurosciences that the critical and sensitive periods for brain and biological development are significantly influenced by experience in the early years, beginning with pregnancy.

A substantial investment in early child development will be necessary to improve the competence, health, and well-being of populations throughout the world.

Chapter Two: It Takes A Child To Raise A Village

The oft-referenced African proverb "it takes a village to raise a child" recognises that children live in families and families live in communities. During the launch of the *2007 Global Monitoring Report*, the Jamaican Minister of Education flipped the proverb and stated: "It takes a child to raise a village".

Humanity's experiments in civilisations provide lessons for the challenges of the 21st century. 10,000 years ago, the small groups of hunter-gatherer societies gave way to the towns and cities, laws, religions, technological innovations, armies, rulers, and governing institutions which resulted from the advent of the plough and the onset of the agricultural revolution. This began a series of 'experiments in civilisations' in which humanity has been engaged ever since.

Humans in different parts of the world were able to create massive and complex empires, including the Chinese, the Incas, the Greeks, the Iroquois, and the British. The history of the last 10,000 years shows a delicate balance between the understanding and interests of rulers, social-political organisations, and other elites, and their ability to plan for the future and secure and sustain relative prosperity and stability. When the balance tipped, the civilisation failed.

The advance of knowledge has made those societies that possess it more prosperous; however, there are also negative consequences associated with the exploitation of technological innovations. The presence of weapons of mass destruction makes it imperative that humans learn to communicate and understand each other, plan for the future, and control their behaviour if the evolution of civilisations is to continue.

Families are the basic social unit of human societies. They nurture the young and ensure the survival of the species—but they have never done it alone. Childrearing has always taken place within the group, the tribe, the village, the neighbourhood, the community. Today's families are adapting to the shifting realities of global economies, technological advances, and increasing demands to produce a new, healthy, competent generation capable of participating in rapidly changing, democratic societies.

Pluralism is an engagement that creates a common society from diversity. It affirms and accepts diversity and rejects intolerance. Canada's success as a pluralistic society is enviable but there are two troubling issues that will undermine its achievements if ignored. These issues are the prospects of visible minority immigrants and their children, and conditions in Aboriginal communities. Our future depends on our ability to manage the complex interplay of the emerging new economy, changing social and physical environments and the impact of change on individuals, particularly young children in their most vulnerable, early years. Early childhood development affects education, health, the social capital, and the overall equity within populations. This is key for stable, cohesive societies and economic growth.

Chapter Three: How Are Children Doing?

"What gets measured improves and what gets measured gets attention" – Charlie Coffey

Child population health appraisals are democratic watchdogs revealing how well governments are meeting their national and international commitments. They demonstrate returns on taxpayer investments and expose inequities between groups and regions. One quarter of Canada's children between birth and age 6 are experiencing some learning or behavioural difficulty. These problems in the early years have been shown to correlate with later difficulties in school performance, social adjustment, and health.

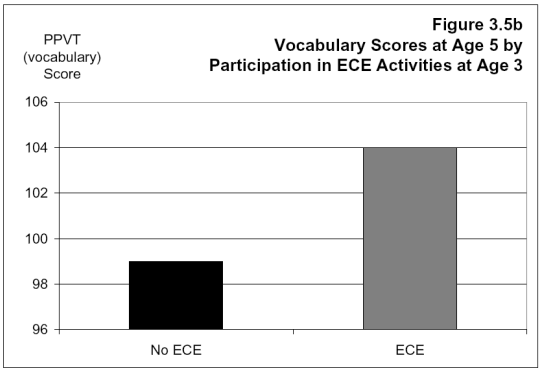

Figure 3.5b
Vocabulary Scores at Age 5 by Participation in ECE Activities at Age 3

Where families fit on the economic ladder contributes to children's developmental outcomes, but income is not the whole story. Many children in low-income families are doing just fine, and some children living in affluence are not doing well. New data collection methodologies document other influences on child well being. Community initiatives and public policies aimed at improving outcomes for children can be supported by suitable outcome measures. Reliable data and analysis can provide direction to public policy development. Regular assessment and reporting on initiatives is an important component of democratic accountability.

Since the release of the *Early Years Study*, the reporting of early child development outcomes in the context of demographic and socio-economic information has dramatically increased, providing a more effective mechanism to inform policy development.

Chapter Four: Chaos

Historically, programs for young children and formal education have developed separately, with different systems of governance, funding streams, and training for staff.

The realisation that children can be 'cared for' and 'educated' at the same time has not entered the thinking of most policy makers. As far as governments are concerned child care is a welfare service. Education is a public service.

— Emily Noble, President, Elementary Teachers Federation of Ontario

Current programs that are potential components for a system of early child development and parenting programs for young children and their families include: federal, provincial, and local government-sponsored programs, services, and information campaigns which promote healthy pregnancy, birth, and infancy; regulated child care centres, which provide developmental programming for children from as young as three months to twelve years of age; nursery schools (also known as preschools), which offer two to three hour group educational experience for preschool (2 to 6 year old) children; family child care, which refers to care for small groups of children, usually in the home of the care provider;

kindergarten, which is offered through the publicly-funded school system and operates under provincial/territorial education legislation; family support programs, which are designed to complement a family's existing strengths and resources, address existing problems, and/or aim to prevent them; early identification and intervention programs, which are designed to ameliorate family or community risks that are usually associated with disadvantages, and services which are designed to identify and treat developmental problems early in children's development; early childhood programs for aboriginal children, which are funded federally for on-reserve programs, while the First Nations/Inuit Child Care Initiative funds child care in designated communities.

Across Canada, early childhood programs fail to respond adequately to the needs to modern families or to the new science documenting the importance of early childhood experiences to later health and well-being. In every region of the country, parents confront the consequences. What Canada needs is the policy framework for an early childhood system outlining a common vision, consistent goals, and clearly defined roles and responsibilities for governments and communities.

Chapter Five: Thinking Big…..Starting Small

The *Early Years Study* by Margaret McCain and Fraser Mustard not only electrified scientists working in the area of early child development, it became a tool and motivator for communities to take action on behalf of their children and families. Mothers receiving social assistance have acquired the skills and confidence to lead parent school councils into new alliances. Grandparents have become the supporting backbone and welcomed volunteers in early child development programs. Business people have lent their expertise to kick start innovative community projects. Foundations have identified early child development as a priority funding area. Community agencies have committed their brightest staff and significant resources to develop and showcase model programs. These each provide excellent examples of leadership, not from authority, but from the ability of communities to adapt to a challenge. The motto is to think big about early child development, and to start small in local communities to establish sustainable change.

A *Best Start* School/Community Partnership

Our Early Years Centre began in 2005 with a request to schools to declare surplus space suitable for an after-school or preschool program. Holy Name of Jesus School had two empty classrooms; who would have known those unused areas could be transformed into a luxurious children's centre. Chosen as a Best Start demonstration site, the centre now offers a parent/child program for families with infants and preschoolers; after school activities; a full day program for children whose parents are in the workforce and a free half day 'Kindergarten readiness' program for 3 year olds. The centre has brought many added opportunities for the school community. Additional found space now houses a beautiful, fully-equipped nutrition room hosting a breakfast club and youth cooking classes where parent volunteers join students from Grades 6 to 8 to teach safety in the kitchen while emphasizing healthy eating alternatives.

—Jenny Frappa, Principal of Holy Name of Jesus Catholic School

Francophone Early Childhood and Family Centres in Manitoba

Early Childhood and Family Centres are designed to strengthen the linguistic and cultural dimensions of the minority francophone community in Manitoba. Located in schools, these programs integrate early learning, care, and parenting supports. The school is open for all parents and children, not only those of school age, and offers more opportunities to live and speak in French, such that children

develop a sense of belonging to their language community from a very young age. Anglophone parents in mixed language families can benefit from programs and services that assist them in supporting their child in a Francophone context.

Communities have demonstrated their willingness to participate, learn, share, and innovate but they need more than opportunities to create a collective vision; they need the mandate and resources to realize it. Senior governments are responsible for creating an infrastructure that promotes the sharing of best practices through professional training, research, data collection, and distribution of accessible information. They alone have the policy and financial levers to take up the best and most effective community models and promote replication.

Chapter Six: Investing In Early Childhood Development

The evidence is compelling and overwhelming: well-funded integrated child development and parenting programs improve the cognitive and social functioning of all children. If properly linked to labour, health, and social services, early childhood programs can deliver additional outcomes, such as enhanced maternal employment, less family poverty, better parenting skills, and greater family and community cohesion. Quality early childhood programs are not only good for children and families, they are good for the bottom line. Focused public spending on young children provides returns that outstrip any other type of human capital investment.

Early child development is a prime time investment opportunity for society providing greater returns than any other period of life. Investments need to be substantial and sustained to promote equal opportunity for optimal development for all children and produce the documented economic, health and social benefits. The involvement of the different sectors of society—public, voluntary, and private—in creating a system of early childhood programs will help build social capital, which is thought to be a key factor in long-term economic growth and the maintenance of tolerant democratic societies.

Chapter Seven: Science Into Action

Harness the Evidence: Be informed about the science of early childhood development; share it, apply it, and act on it. The findings from neuroscience and developmental research, economic analyses, and relevant studies of academic achievement, health, and behaviour need to be accurately and effectively conveyed to policymakers, practitioners, and the public.

Connect Communities: Good early childhood programs, schools and services build vibrant communities that draw knowledge workers. Communities are important. Each has its own array of challenges and assets making a "one-size fits all" approach to early childhood programming a missed chance to effectively match resources with local needs. Yet communities share common challenges and opportunities. Exchanges among communities build energy, expertise, and accelerate action.

Influence Public Policies: Early childhood development is a pragmatic issue, not an ideological one. Advocates come from the political right, left and in between. A solution in Canada is not contingent on a new government, a new leader or a new mechanism. School boards, municipalities, and

community agencies can lay the groundwork for more effective program delivery for young children and families.

Cultivate Leaders: While Canada debates its approach to early child development, other countries surpass us. Dynamic leaders can take on social problems by bringing together people and resources to work towards a shared vision and to create viable solutions for their community. Leadership comes from different places and includes mayors, educators, health practitioners, churches, business and parents themselves.

Monitor Results: Data collection and analysis needs to be properly resourced. Poor data is worse than no data. While no data, means no problem and no action; poor data creates big problems and bad actions. Communities need to know how their children are doing and if community environments are making a difference in early child development outcomes. Data collection and monitoring provides information so agencies can avoid duplication, provide services more effectively and utilize the specialties of each partner to the greatest effect.

Service integration is designed to use existing resources more effectively to the benefit of children and families. Everyone comes to the table with a unique background and viewpoint, but what we all have in common is a desire to see children reach their full potential.

A Final Note: In the intervening years since the *Early Years Study*, significant understanding and a surplus of knowledge has been generated about the significance of early childhood development. There is still a deficit of action. The well-being of children is so critical it warrants the commitment of government, institutions, service providers and individuals. This does not mean everyone plays the same role; but everyone needs to play a role. The world's future literally depends on it.