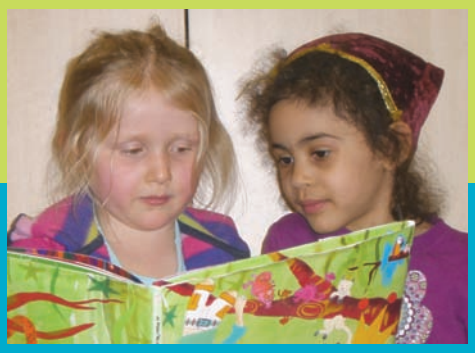
An Updated and Annotated Summary of Evidence

A Compendium To: With Our Best Future in Mind



Implementing Early Learning in Ontario
June 2009

Guiding Assumptions

The Special Advisor on Early Learning began his assignment by publicly posting six assumptions that would guide his work. These assumptions are informed by scientific evidence.

Assumption One: All decisions regarding the development of an effective program for early learning should flow from what is in the best interests of children and their families.

Developing and implementing a successful plan for all day learning for 4- and 5-year-olds should be situated within a system of childhood programs that begin before birth and continue for school aged children. All programming should be child and family centered. Every idea for moving forward should be tested against two simple questions: "Is it good for kids?" and "Will it help the health and well-being of the child and her/his family?"

Assumption Two: Early child development sets the foundation for lifelong learning, behavior, and health.

Early childhood experiences shape the architecture of a young child's brain and influence her/his capacity to learn, to get along with others, and to respond to daily stresses and challenges. Informed, responsive adults and stimulating activities benefit early brain development.

Assumption Three: Partnerships with families and communities strengthen the ability of early childhood programs to meet the needs of young children.

Parents are children's first and most powerful "teachers" and role models. Parents offer learning opportunities that are based on the deep knowledge they have of their children. When parents and other caregivers are involved in early childhood settings, they tend to be more supportive of children's learning and their children come to view school more positively.

Assumption Four: Respect for diversity, equity, and inclusion are critical for honouring children's rights, optimal development, learning, and contributing to a more inclusive society.

Ontario is a province of many cultures, family groupings and languages. Early childhood programs need to reflect those differences. This requires creating environments that promote attitudes and beliefs that respect equity, diversity, and democracy; are inclusive of children with special needs; and provide children with a strong sense of self in relation to others. Quality early learning environments incorporate the diversity of their participants to enrich programming for all. As well, while universally available, effective early learning programming should adapt to a wide variety of individual differences and needs of children and their families.

Assumption Five: A planned curriculum and skilled professionals support a balance of learning-based play and academic preparation

A planned curriculum begins with an informed understanding of what and how children learn and sets specific goals based on that knowledge. An effective curriculum for young children emphasizes learning-based play. Children have opportunities for sustained interactions with other children, guided by educators with an understanding of early childhood development. The result is a powerhouse combination that boosts children's early learning, including early literacy, numeracy and inquiry skills, and self-esteem.

Assumption Six: An integrated, well-managed system of early learning can achieve good results

Effective strategies to promote early learning have a clear vision with defined goals, targets, time-lines, responsibilities and accountability measures. Effective leadership of an early learning system ensures strong community engagement, integration of supports for children and families, regular data collection and analysis, long-term planning, financial management, and standard-setting and enforcement. These objectives are achieved through supportive evaluation, feedback, and continuous improvement.

Education, municipalities, public health and community partners are participating in regional Best Start networks and are working to build a seamless network of early childhood programs with the school acting as the hub. Full-day learning builds on Best Start's platform of early childhood programs in Ontario.

Purpose of Research Review

The purpose of this research review is to identify evidence-based design principles for the Special Advisor on Early Learning's recommendations, which build on the six assumptions.

The process included:

- Reviewing key documents related to early childhood programs and systems;
- Selecting key documents that describe programs and studies of those programs in Canada and internationally;
- Summarizing findings related to topic areas;and,
- Identifying common design principles.

The research scan identifies eleven evidence-based design principles that inform the report of the Special Advisor on Early Learning's report:

1. Effective Aboriginal early childhood programs are generated by Aboriginal communities.

2. Parent involvement and engagement should be built into early childhood program policies and practices.

3. Diversity, equity and inclusion are prerequisites for learning in early childhood programs.

4. Effective curriculum and pedagogy is planned, intentional and child-centred.

5. Professional education and development, appropriate remuneration and working conditions are essential to a knowledgeable and responsive workforce.

6. Convenient and well-designed early childhood program facilities best accommodate young children and families.

7. Young children and families benefit from comprehensive integrated programs.

8. Governance structures are needed to merge the current array of fragmented early childhood programs into an early childhood system.

9. Equitably distributed public investment is needed for capital, operations, and infrastructure.

10. System monitoring requires tracking children's achievement, program effectiveness, community impact and system performance.

11. A coherent implementation strategy is essential to building an early childhood system.

1. Effective Aboriginal early childhood programs are generated by Aboriginal communities. (Aboriginal communities include First Nations, Inuit, Métis and non-status Aboriginal peoples)

1.1 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.

- 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 (Fearn, 2006; Canadian Council on Learning, 2007a; Ball, 2008).

- Non-Aboriginal early childhood programs need staff and curriculum that respectfully incorporate Aboriginal cultures (Organization for Economic Cooperation and Development [OECD], 2004; Ball, 2008). The Organisation for Economic Cooperation and Development (OECD) thematic review team noted that while policy and program goals identified cultural sensitivity, there was little evidence this was practiced (OECD, 2004). Australian researchers (MacNaughton & Davis, 2001) have investigated young children's understanding of indigenous Australians and report that knowledge about Aboriginal peoples was based on past cultural, often exotic, practices. Several research studies suggest early childhood programs can avoid homogenizing Aboriginal peoples into a collective 'they' and avoid building knowledge of Aboriginals that positions them as different from the mainstream (MacNaughton & Davis, 2001).

- A gathering (sponsored by the Canadian Pediatric Society) in 2005 brought together 160 Aboriginal and non-Aboriginal leaders and 11 national organizations to help define child health, acknowledge barriers and strengths in current systems and to articulate how to better support the health and well-being of all Aboriginal children and youth. They identified the need for healthy communities, including the need for appropriate and accessible services for young children (Blackstock, Bruyere, & Munro, 2005). The collaborative process identified several principles for child health that are applicable to Aboriginal early childhood programs:
    - Aboriginal peoples are in the best position to make decisions that affect their children, youth, families and communities.
    - The ability of families to define their own cultural identities must be respected and not imposed on them by others.
    - There is a need to acknowledge discrimination and to articulate the tangible expressions of racism in the system.
    - The health [and development] of Aboriginal children is a balance between the physical, spiritual, emotional and cognitive senses of self and how these

interrelate with family, community, world and the environment, in the past, present and future.

- Because culture and language are ways of seeing and understanding the world, the program will be most effective when it can relate to Aboriginal children and their families in that context.
- Aboriginal children need the best that Aboriginal and non-Aboriginal systems have to offer. For that to happen, the mainstream system needs to make space for Aboriginal concepts.
- Aboriginal people should take a lead role in addressing issues and establishing relationships with non-Aboriginal providers and organizations. These relationships should be characterized by reciprocity, respect and a balance of power

1.2 Some Aboriginal children live in poverty and face significant developmental and health challenges; however it is inaccurate to conclude that Aboriginal children, families and communities cannot succeed.

- Incidents of infant mortality, premature births and low birth rates, Fetal Alcohol Spectrum Disorder, behavioural challenges, and cognitive and language delays are more prevalent in Aboriginal communities (Turcotte & Zhao, 2004). The 2007 UNICEF report on child poverty notes that the conditions and developmental outcomes for Aboriginal children in Canada are especially desperate. However there are dramatic differences between Aboriginal communities (Canadian Population Health Initiative & Canadian Population Health Initiative, 2004; Statistics Canada, 2003). Studies of First Nations communities in British Columbia find dramatic variations between communities, with several rated higher on indices of early childhood outcomes (Hertzman, 2008) and lower on youth suicides (Chandler & Lalonde, 2004) than the Canadian average. Differences have been attributed to the high degree of social inclusion in the community. Aboriginal BC communities that have taken steps towards self-determination have better health and developmental outcomes.

- Several reports from Aboriginal organizations highlight the need for honest acknowledgement of the history of Aboriginal and non-Aboriginal relationships since European colonization and to respect different perspectives among Aboriginal communities as well as those between Aboriginal and non-Aboriginal communities (Blackstock, Bruyere, & Munro, 2005).

1.3 Aboriginal children, families and communities benefit from effective early childhood programs.

- Native 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 (Native Council of Canada, 1990; Greenwood, 2006).

- The Aboriginal Peoples Survey (off reserve) in 2001 reported that 16 per cent of children entering Grade 11 had participated in some type of Aboriginal early childhood program, compared to only 4 per cent of Aboriginal children who had turned 14 (Statistics Canada, 2001). This increase is largely a result of Aboriginal Head Start programs and Aboriginal Community Action Plan for Children (CAPC) programs (Ball, 2008; McCain & Mustard, 1999).

- National evaluations of Aboriginal Head Start programs to date suggest parental satisfaction, increased use of Aboriginal languages and cultural practices, moderate improvements in literacy, and increased health and physical development (Public Health Agency of Canada, 2007). An evaluation study of Aboriginal Head Start programs in the Northwest Territories reports that children had widely varying skill levels when they began the program and these differences persisted into Grade 11 (Western Arctic Aboriginal Head Start Programs, 2006). The study also reported that the percentage of children assessed with above-readiness skills after one term of programming increased from 29 per cent in 2001 to 47 per cent in 2004.

1.4 Significant barriers limit access to and utilization of Aboriginal early childhood programs.

- Access to Aboriginal early childhood programs is challenged by the multiple jurisdictions involved in program delivery and funding (Ball, 2008). On-reserve children's services are mainly dependent on the federal government for funding (Friendly, Beach, Ferns, & Turiano, 2007). As provinces developed their child care services and mechanisms, most did not extend these services to Aboriginal communities (Friendly et al., 2007). Further complicating the overlap is the relative mobility of Aboriginal families who often move back and forth between their reserve and off-reserve communities.

- Barriers surrounding the recruitment and retention of qualified staff that challenge child care services across Canada, are magnified for Aboriginal communities. Several studies point to the need for new approaches to the training of Aboriginal teachers (Beach & Rochon, 2007; Greenwood, 2001; Native Council of Canada, 1990).

- There are few resources to guide culturally appropriate learning for Aboriginal children (Greenwood, 2006). Only one-quarter of Aboriginal peoples reported that they had enough

knowledge of an Aboriginal language to carry on a conversation (Statistics Canada, 2006). Among children, only 16 per cent spoke an Aboriginal language in 2001, down seven percentage points from 1996 (Canadian Council on Learning, 2007a).

- The legacy of residential schools, when children were removed from their parents and placed in state institutions, continues to haunt Aboriginal communities (Canadian Institute of Health Information & Canadian Population Health Initiative, 2004; Greenwood, 2001).

2. Parent involvement and engagement should be built into early childhood program policies and practices.

2.1 Families have the strongest influence on children's early learning and development.

- Parents and other family members are the dominant influence on young children's early development and learning (Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2004; NICHD Early Childhood Research Network, 2004a). Strong parent-child relationships and the quality of parenting are powerful influences on immediate and long term development and learning and can act as an emotional buttress for young children (Bornstein, 2002; Centre for Community Child Health, 2007; Kirp, 2007). The family environment is the primary source of experience for children and mediates their contact with the broader environment (Siddiqi, Irwin, & Hertzman, 2007). Parental sensitivity, responsiveness, warmth and consistency appear to be important across cultural contexts, but diverse childrearing practices, influenced by cultural contexts, are also associated with positive child outcomes (Centre for Community Child Health, 2007; Konner, 1991; Shonkoff & Phillips, 2000).

- Home learning environments (shaped by parents and other family members) appear to be more important to positive child outcomes than children's participation in early childhood programs, family structure or a family's socioeconomic status (Sammons, Sylva, Melhuish, Siraj-Blatchford, Taggart, & Elliot, 2004; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2009; Willms, 2002). In a United Kingdom longitudinal study of preschool and primary school experiences, maternal education and the home learning environment remained the strongest predicators of better outcomes (academic and behavioural) for children at age 10. (Sylva et al., 2009). Maternal education is associated with children's higher achievement by enriching home environments through increased learning materials, learning stimulation, parental responsivity, modeling of social maturity and variety of experiences (Zadeh, Farnia, & Ungerleider, 2006).

2.2 Parent involvement and engagement in early childhood programs benefits children's outcomes through improved future home-school partnerships, parenting skills and home learning environments.

- School improvement and effectiveness studies identify parent involvement as one factor that improves school performance across all socioeconomic groups (Kohn & Zellman, 1994; Mortimore, 1989; Pelletier, 2006; Epstein & Sanders, 2002). Families who are involved are more likely to establish peer networks with other families and to have more information about their children's school (Epstein & Sanders, 2002).

- Parent involvement in early childhood settings multiplies children's opportunities for learning as parents bring skills and activities back into the home environment (Weiss, Caspe, & Lopez, 2006; Reynolds & Temple, 2008; Sylva et al., 2009). Parents' involvement in early childhood settings is associated with being more supportive of children's learning and their children are more likely to have more positive experiences in formal schooling (Corter, Bertrand, Pelletier, Griffin, McKay, Patel, & Ioannone, 2006; Cleveland, Corter, Pelletier, Colley, Bertrand, & Jamieson, 2006; Wolanski, 2008). The United Kingdom longitudinal study of the impact of effective practice reports that children's home learning environment during the preschool years remains a strong predictor of academic achievement at age 11 years (Sylva et al., 2009). The Chicago Child-Parent Centers measured parent involvement by aggregating ratings of parent participation in school by children's first grade teachers. Researchers found that parent participation in preschool programs was associated with higher levels of parent participation in Grade 1 (Graue, Clements, Reynolds, & Niles, 2004).

- An extensive international review of early childhood programs identified 14 studies that included measures of parenting outcomes associated with parent involvement and engagement in early childhood programs (Mitchell, Wylie, & Carr, 2008). The review noted evidence of improved interactions with the child, including greater acceptance of the child's behaviour, positive parenting, activities to help the child learn at home, father involvement in the early childhood setting and in parenting, and parental knowledge of early child development.

- Zellman and Perlman (2006) caution that few early childhood program studies have examined parent involvement as a unique concept independent of other parental characteristics, such as parental education, parent skills or capacity, or commitment to the parenting role. It is possible that more competent parents are the ones who respond to parent involvement strategies. The relationship between increased parental involvement and better outcomes may be a result of drawing in parents who are already more competent.

3.3 Involving parents in early childhood programs needs to go beyond *whether* parents are involved to focus on *how* they are involved and what happens as a result.

- Parent involvement in school settings includes parenting, communicating, volunteering, learning at home, decision-making, and collaborating with the community. The same strategies may be useful in organizing family involvement in early childhood settings (Epstein & Sander, 2002; Pelletier, 2006; Corter & Pelletier, 2005; Corter et al., 2006).

- Parent involvement benefits are greatest when there is planned programming for children and their families, when relationships between schools and families are based on mutual trust and respect, and when schools are sensitive to family culture, values, language, and composition (Bernhard, Freire, & Mulligan, 2004; Gonzalez-Mena, 2005). Guidelines for culturally responsive parent involvement emphasize respectful dialogue and awareness of cross-cultural communication skills (Daycare Trust, 2003). To include everyone, early childhood settings must encourage healthy dialogue about the principles and shared beliefs that relate to inclusion, diversity, and equity (Moss, 2007; Bernhard, Cummins, Campoy, Ada, Winsler, & Bleiker, 2006) and expand communication. A Canadian study of Junior Kindergarten found that when teachers offered a wider range of communication opportunities to parents of linguistic minority children who were experiencing difficulties with verbal skills, they were more likely to become engaged than other parents (Pagani, Jalbert, Lapointe, & Herbert, 2006).

- Parents want to understand how their children develop and learn (Corter & Pelletier, 2005; Shonkoff & Phillips, 2000). They benefit from experience with children, observations and information about how to support learning and to recognize how their children are doing (Bornstein, 2002; Corter & Fleming, 2002; Centre for Community Child Health, 2007). Parents also benefit from having a say in what is offered in the program and what goes into the curriculum (Corter et al., 2006). The United Kingdom study of early childhood programs found that effective settings shared child-related information more often and parents were more involved in decision-making about the curriculum than in less effective settings (Siraj-Blatchford, Sylva, Taggart, Melhuish, Sammons, & Elliott, 2003). Shared developmental and educational aims between early childhood programs and parents encouraged a complementary approach that included sharing expertise and knowledge about the child and the child's development (Siraj-Blatchford et al., 2003; Siraj-Blatchford & McCallam, 2005). Child-related information about curriculum and developmental achievements were shared more frequently between staff and parents, and families were asked more often to be involved in decision-making about their child's program (Siraj-Blatchford, Sylva, Laugharne, Milton, & Charles, 2007).

- Daily communication that includes a meaningful exchange of information between parents and early childhood program staff supports children's development and is a measure of program quality. (Zellman & Perlman, 2006). In the Canadian study of linguistic minority children attending Junior Kindergarten, parents reported a better understanding of their children's learning and development through the intentional opportunities for communication (Pagani, Jalbert, Lapointe, & Herbert, 2006). Explicit parent education geared to the goals of parents and delivered in ways that respect adult learning principles can be joined with child programming in effective two-generation programs (Cleveland et al., 2006; Goodson, 2005; Shonkoff & Phillips, 2000). Family literacy studies of programming for parent and child learning suggest that these may foster parents' knowledge about language and literacy development with benefits for children's learning (Senechal, 2006; Pelletier, 2006).

- Early childhood settings have daily opportunities to connect families with each other. Families have strengths, experiences and skills that they can share with one another (Centre for Community Child Health, 2007; Wilson, 2006). Several studies report that families form social networks, make cultural connections and participate in their communities (contributing to social cohesion) as a result of their early childhood program participation (Corter et al., 2006; McCain, Mustard & Shanker, 2007; Mitchell, Wylie, & Carr, 2008). Families who are newcomers to Canada and who share similar cultural traditions or who speak languages other than English or French, benefit from meeting each other. Families also benefit when they learn about child rearing practices from families that have different backgrounds. Informal social networks among families with young children can become valuable resources that promote children's health and well-being (McCain & Mustard, 1999; Moran, Ghate, & van der Merwe, 2004; Weiss et al., 2006).

- Evidence from several studies suggests that integrated early childhood programs are more likely to support family involvement by setting a broader range of specific goals and monitoring outcomes that relate to children and to their parents or other significant family members (Mitchell et al., 2008; Mort, 2008; National Evaluation of Sure Start Team, 2005; Browne, Roberts, Gafni, Byrne, Kertyzia, & Loney, 2004). Toronto First Duty research found that integrated settings seemed to be more effective in encouraging positive home learning environments and school involvement than other types of early childhood settings (Corter et al., 2006). Integrated settings are also more effective in reducing family stress (Corter et al., 2008). Parent education that builds parenting skills, information and referrals to specialized resources can be offered through stable program platforms that offer quality early childhood programs (Browne, Byrne, Roberts, Gafni, & Whittaker, 2001). Service integration increases families' access to the services and support that families need, when and where they need them (Corter et al., 2006).

- The Ontario School Council experience suggests that an emphasis on formal governance roles for parents can be costly in terms of time and effort and does not appear to be helpful in making comprehensive school reform effective (Corter & Pelletier, 2005). Similar issues may exist in formal governance structures in early childhood programs, where parents may experience their formal roles as tokenism (Corter et al., 2006).

3. Diversity, equity and inclusion are prerequisites for learning in early childhood programs.

3.1 Early childhood programs can be organized to reflect and respect Ontario's ethno-cultural and racial diversity.

- 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 (Bennett, 2005). Preconceived notions about children's ethno-cultural backgrounds, gender, ability or socioeconomic circumstances create barriers that reduce engagement and equitable outcomes (Centre for Community Child Health, 2008a; Bernhard, Freire, & Mulligan, 2004; Robinson & Diaz, 2006).

- Early childhood programs do not exist in isolation. They are a product of society and reflect social relations that exist nationally, provincially, regionally and locally (Daycare Trust, 2007; Robinson & Diaz, 2006). Early childhood programs also reflect the surrounding media and political dialogue. Racial, religious and ethnic tensions and incidents are often part of the context. Confronting prejudices increases the involvement of all children and their families (MacNaughton, 2006). Educators can take actions to avoid prejudice and to counteract bias when it occurs in early childhood settings (MacNaughton, 2006; Siraj-Blatchford, 2006).

- To turn belief statements and principles into practice in early childhood programs requires an infrastructure that actively promotes engagement of all children and their families (Bernhard, Lero, & Greenberg, 2006; Centre for Community Child Health, 2008). Effective strategies begin by identifying the early childhood program needs of families in their communities, and taking this information into account when planning the curriculum and pedagogy of the program (Ali, 2005; Bernhard, 2003). Curriculum should be applied in the context of how well it enables children's full participation (Bernhard et al., 2006; Bernhard, Lefebvre, Kilbride, Chud, & Lange, 1998; Siraj-Blatchford, 2006).

- Early childhood programs can be proactive in countering racism and stereotypes by listening to families and designing programs that demonstrate equality, respect and

appreciation for cultures (beyond token gestures related to food or celebrations) other than one's own (Ali, 2005; Robinson & Diaz, 2006; National Research Council, 2001). Programs can meet the unique cultural or other needs of minority language or new immigrant families.

- Canadian early childhood program resources are not evenly distributed among communities and there are increased barriers to access in rural and remote regions and for urban Aboriginal and new immigrant families (OECD, 2006). Rural and remote communities require flexible early childhood settings that can adapt to the challenges of geographic distances and isolation (Gott & Wilson, 2004).

3.2 Early childhood programs can provide support to all families with awareness of and respect for structural and sexual diversity.

- Children growing up with lesbian, gay, bi-sexual, transgender/transsexual and queer (LGBTQ) parents are often considered to be "invisible" minorities, although statistics indicate that their numbers are growing in Ontario and elsewhere (Janmohamed, 2006). LGBTQ families warrant particular care, consideration and sensitivity within early childhood programs. Depictions of LGBTQ families within program policies and practices contribute to an environment that includes sexual diversity. Early childhood programs can be proactive in eliminating homophobia and heterosexism (Robinson & Diaz, 2006).

- Families come in all sizes and shapes. Early childhood programs can move away from a depiction of traditional, nuclear families as the norm with different family constellations as the 'others', to one that recognizes multiple family structures (Shonkoff & Phillips, 2000).

3.3 Early childhood settings in Francophone communities can contribute to the protection, enhancement and transmission of the French language and culture in Ontario.

- Regular attendance in early childhood programs is a means of preserving the integrity of the Francophone culture and encouraging young children to use the French language (Giroux, 2007; Herry, Maltais, & Thompson, 2007; Masny, Lajoie, & Pettier, 1993; Masny, 1995; Ontario Ministry of Education, 2005; Théberge, 1992). Canadian research suggests that French school-based child care has a positive impact on French-language learning in minority settings, promotes the recruitment of students into school programs and is a valuable resource for children and parents in exogamous families (mixed Francophone and non-Francophone parents) (Giroux, 2007; Lafreniere-Davis, 2005; Prentice, 2007a). When child care and other preschool programs are offered within the school system, a greater

number of young children acquire the language skills necessary for learning and for success in a French-language school (Giroux, 2007; Théberge, 1992).

3.4 Meaningful participation for all requires strategies for English and French language learners.

- Children who are learning English or French as an additional language benefit when their first language is valued (Centre for Studies of Child Care Employment, 2008; Chumak-Horbatsch, 2004; Hernandez, Denton, & Macartnery, 2008; Tabors & Snow, 2001). In order to be able to determine a child's capacity to learn, the child needs adequate opportunities to learn in a language that she or he can understand (Tabors & Snow, 2001). Children who are learning two languages need to continue to learn vocabulary and conceptual skills in their home language because without this continued development in the home language, they will have greater difficulty developing skills in the second language (Office of Head Start, 2008; Tabor & Snow, 1994).

- Many children whose home language is not English or French are well-positioned to become bilingual (Hernandez et al, 2008). Research indicates that children who learn English or French after their home language is established (around age three) are able to acquire full English/French fluency during their preschool and early school years (Office of Head Start, 2008). The bilingual skill leads to long-term cognitive, social and economic advantages (Hernandez et al., 2008).

- A variety of specific strategies can support English/French language learners. These learners may need differentiated learning opportunities to benefit fully from early childhood programs (Siraj-Blatchford et al., 2003; Shonkoff & Phillips, 2000). A dual language approach to teaching can be effective for English language learners, and can benefit native English speakers (Espinosa, 2007, 2008). Interpreters can increase the level of effective communication with parents (Office of Head Start, 2008).

3.5 Children with special needs and families in need of extra support or special efforts can be accommodated within early childhood programs.

- Research in both the U.S. and Canada indicates that child care centres that have higher levels of inclusion are associated with higher scores on measures of program quality (Buysee, Wesley, Bryant, & Gardner, 1999; Irwin, Lero, & Brophy, 2004). A longitudinal United Kingdom study found that children with special needs who attended high quality preschool programs showed benefits (academic achievement and social/behavioural

outcomes) at age 11 (Sylva et al., 2009). Irwin, Lero & Brophy (2004) concluded that high program quality is an essential requirement for successful inclusion. Increased education about inclusion and working with children with special needs is necessary at all training levels in early childhood education (Lero, Irwin, & Darisi, 2006).

- Successful inclusion is never an accident (City of Toronto, 2007; Lero & Irwin, 2008). Early childhood programs that include children with identified special needs require a supportive funding system. Funding must be sufficient, explicit and allocated in a timely fashion. Diagnostic assessments need to be made as early as possible. The time when children with special needs transition into early childhood programs from home or early intervention services is a time when supports must be in place to benefit the children and support educators. Designated funding can help maintain inclusion quality and best practices in centres that regularly include a number of children with special needs, while building capacity in centres that have no or very limited experience to date (City of Toronto, 2007). *A Partnership for Inclusion - Nova Scotia* is an example of an effective program that supports centres and staff to improve program quality and inclusion (Lero, Irwin, & Darisi, 2006).

3.6 Living in poverty during early childhood increases the probability of exposure to developmental risk factors.

- Developmental immaturity during early childhood make young children particularly vulnerable to problems associated with poverty (Centre for Community Child Health, 2009). Poverty in early childhood is associated with fewer resources including income, housing and parental time, combined with increased stress within families (Keating & Hertzman, 1999; National Scientific Council on the Developing Child, 2006). Children in poor families often have less access to quality early childhood programs. These programs can be particularly valuable to disadvantaged children (Japel, 2008; Sammons, Sylva, Melhuish, Siraj-Blatchford, Taggart, Hunt, & Jelicic, 2008).

3.7 Early childhood programs can support equitable outcomes for girls and boys.

- Boys are struggling from Kindergarten to Grade 12 and beyond in Ontario and elsewhere (Statistics Canada, 2004). They are more likely to need remediation, repeat grades, drop-out of high school before graduation and take part in delinquent activities. Their struggles begin in early childhood and are well documented as they enter Grade 1 (Janus & Duku, 2007).

- Differences between how girls and boys fare are based on a complex interplay of biological and cultural factors. The development of boys' brains and nervous systems is delayed compared to girls (Kolb, 2009; Michael, De Bellis, Matcheri, Keshavan, Beers, Hall, Frustaci, Masalehdan, Noll, & Boring, 2001; Tontisirin, Muangman, Suz, Pihoker, Fisk, Moore, Lamm, & Vavilala, 2007). Boys' attention and emotional regulation tend to lag behind that of girls, as do memory, perceptual accuracy and language skills. Boys are typically more advanced than girls in some mathematical reasoning, spatial ability and mechanical abilities (Stanovich, 2000).

- Participation in quality early childhood programs is particularly beneficial for boys (Sylva et al., 2009; Tremblay, Gervais, & Petitclerc, 2008). Early childhood programs can increase the chance that boys have an equal opportunity to succeed by: ensuring flexibility in meeting learning goals; insisting on rigorous physical activity standards; increasing the presence of male educators; valuing hands-on learning; providing materials for a full spectrum of interests for all girls and boys; and, reflecting carefully to identify possible biases in assessments of children's development and learning.

4. Effective Curriculum and Pedagogy is Planned, Intentional, Child-Centred and Adult-Guided.

Curriculum refers to the content of early childhood settings, including the organization of the physical space, materials and activities that are designed to encourage learning processes, skills and the acquisition of specific information. Pedagogy is about how learning takes place.

4.1 Curriculum and pedagogy begin with an understanding of early human development.

- The formation of the brain and the construction of the brain's neural pathways proceeds in a predictable sequence beginning in the early prenatal period and extending into adolescence (Bauer & Pathman, 2008; McCain et al., 2007; National Scientific Council on the Developing Child, 2007). A succession of "sensitive periods," each of which is associated with the formation of specific circuits that are associated with specific abilities, establishes the architecture of the brain (Couperus & Nelson, 2006; Huttenlocher, 1979). Increasingly complex skills and their underlying circuits build on the circuits and skills that were formed earlier. A child's brain may constrain what is possible but it is the child's interest and curiousity that motivates the effort required for the next step in development (Blair & Diamond, 2008; Miller & Keating, 1999; Posner & Rothbart, 2006). That effort forces or stimulates the brain to develop new connections needed for the task at hand (Lewis & Todd, 2007; Shanker, 2008). Early brain development manifests itself in a child's early development of social competence, emotional well-being, cognitive skills, language

and physical abilities, which carry forward into formal schooling and beyond (Blair, 2002; Posner & Rothbart, 2006; Shaker & Greenspan, 2009).

- A complex array of environmental and biological factors, including genetic make-up, the quality of interpersonal relationships within and outside the family, and the quality of early environments and experiences, shape early brain development and contribute to the pattern and timing of development (Shanker, 2008; Blair & Diamond, 2008). A child needs certain kinds of experiences in order for cognitive, communicative, social and emotional skills to grow, and the brain must develop the necessary connections to support those skills (Greenspan & Shanker, 2004; McCain et al., 2007; Shanker & Greenspan, 2009). Infants learn and develop through their relationships with others, and actively take part in to-and-fro communication exchanges with parents and other caregivers (Field, 2007; Gerhardt, 2004; Shanker, 2008). As infants grow into toddlers and preschoolers, brief exchanges develop into sustained chains of communication and meaningful engagement with family and peers (Greenspan & Shanker, 2004). The ability to think symbolically emerges from increasingly complex interactions with others and is accompanied by the ability to represent feelings, intentions and actions in words, play, drawings and block constructions. Children develop the ability to build bridges between ideas, connecting feelings, facts and new understandings about how the world works through continual, reciprocal interactions with others (Greenspan & Shanker, 2004; Mandler, 2004).

- Biological challenges, such as constraints on neural systems, can profoundly impair the kinds of experiences a child seeks out or is receptive to (National Scientific Council on the Developing Child, 2006). If enticed into the kinds of experiences that engage the various parts of the brain with the necessary input, a child with biological impairments may be able to lay down the connections for neural circuitry and open future developmental possibilities in spite of biological limitations (Shanker, 2008).

- The brain's developing neural circuitry supports a child's increasing ability to regulate emotion, behaviour and attention, which characterizes the growth from helplessness in infancy to competence in social, emotional, cognitive and physical domains of development (Ayoub & Fischer, 2006). Self-regulation skills cut across developmental domains and are the interlocking building blocks of early human development and learning (Blair, 2002; Diamond, Barnett, Thomas, & Munro, 2007; Greenspan & Shanker, 2004; McCartney & Phillips, 2006; Miller & Keating, 1999; Shonkoff & Phillips, 2000).

4.2 Two predominant approaches emerge in cross-country comparisons of early childhood curriculum and pedagogy: social pedagogy (child directed) and pre-primary (educator guided).

- Social pedagogic or child-directed practices, common in Scandinavian countries, New Zealand, and Italy, include a broad developmental framework and local curriculum development (Bennett, 2005; Dickinson, 2006; OECD, 2006). Curriculum decisions are driven by the interests of the children within the context of their families and immediate communities. The focus is on developmental goals, interactivity with educators and peers, and a high quality of life in the early childhood setting. The curriculum has broad orientations and goals for children, rather than prescribed outcomes. The acquisition of developmental skills is perceived as a by-product rather than as the driver of the curriculum (Miller & Almon, 2009).

- Pre-primary or educator-guided practices are common in France, the United Kingdom, Australia and the United States (Bennett, 2005; Dickinson, 2006 OECD, 2006). They are characterized by centralized development of the curriculum, often with detailed goals and outcomes that determine or influence curriculum decisions about what and how children learn. The goals and outcomes are typically national or regional learning standards or learning expectations related to school readiness skills such as literacy and numeracy in preparation for entry into Grade 1 (Friendly, Doherty, & Beach, 2006; Cohen, Moss, Petrie, & Wallace, 2004). Educators tend to interact with children around activities related to the identified learning expectations and rely more on direct instruction strategies. Assessment focuses on children's achievements in meeting the learning expectations (Miller & Almon, 2009).

- In practice, most jurisdictions and programs use approaches that blend elements of both child-initiated and educator-guided curricula, but lean towards one or the other (Miller & Almon, 2009; OECD, 2006). Canadian early childhood programs often blend both approaches, although many programs do not have a clear approach at all (Friendly, Doherty, & Beach 2004; Cleveland et al., 2006; OECD, 2004). Several provinces and territories have developed or are developing early childhood program curriculum frameworks that tend towards child-directed or social pedagogic principles. Provincial and territorial Kindergarten curriculum tends towards pre-primary or educator-guided approaches with specific learning expectations that guide assessment and curriculum planning (Beach, Friendly, Ferns, & Prabhum, in preparation July 2009; OECD, 2006).

4.3 Children benefit from a planned curriculum and pedagogy that organizes the social and physical environments in early childhood programs.

- A planned curriculum with goals for children's learning guides decisions about what to include in the environment and embed in children's experiences and impacts on the quality of early childhood programs (Bennett, 2005; Cleveland et al., 2006; Friendly, Doherty, &

Beach, 2006; Ginsburg, Lee, & Boyd, 2008; National Research Council, 2001; OECD, 2006; Sylva et al., 2004). A broad consensus amongst educators and developmental scientists points to holistic early childhood curricula approaches that support emotional maturity, social competence, cognition, language development and physical well-being (Miller & Almon, 2009; Shonkoff & Phillips, 2000; Sylva et al., 2009). The planned curriculum, across the continuum from child-directed to educator-guided approaches, provides structure and direction for educators who support the development of capacities and skills while respecting a child's interests and choices (Bennett, 2005; Miller & Almon, 2009).

- Researchers are not able to isolate the impact of any one curriculum in comparison to another within the child-directed/educator-guided continuum (Bennett, 2005; OECD, 2006; Shonkoff & Phillips, 2000). However, research findings point to limitations of either didactic or laissez-faire approaches. Curriculum that is dominated by direct instruction, scripted curriculum and a focus on specific learning goals for academic achievements related to literacy and numeracy is sometimes referred to as the 'schoolification' of the early years (OECD, 2006). In the United States, low income children are not showing long-term gains from participating in preschool or primary school programs that emphasize this approach (Miller & Almon, 2009; Nabuco & Sylva, 1996). A study of curriculum approaches in Chicago Child-Parent Centres found that teacher-directed basic skills preschool programs promote early literacy skills that make the transition to Kindergarten and Kindergarten achievement easier (Graue et al., 2004). However, longer-term child outcomes, especially high school completion, come with the benefits typically attributed to child initiated activity – engagement based on child interest, social learning, and learning how to learn. A Canadian study reported consistent findings - a prescribed phonics program delivered in selected Kindergarten classes resulted in poorer reading comprehension in Grade 3, compared to the results from children in control groups (Phillips, Norris, & Steffler, 2007). Early childhood programs that promote child-directed play without the involvement or active support of educators may be referred to as laissez-faire loosely structured programs (Miller & Almon, 2009). Group settings employing a laissez-faire approach to curriculum result in chaos.

- Early learning happens when adult expectations of what children can know and do matches the child's own interests and abilities in meeting those expectations (Miller & Almon, 2009). The effect of an individual educator can outweigh the effect of a particular curricular approach (National Research Council, 2001; Whelan, 2009). It is the quality of pedagogy in implementing and adapting a curriculum that is more important than the specific curricular approach (Shonkoff & Phillips, 2000; Sylva et al., 2009, Whelan, 2009). Effective educators employ a variety of pedagogical approaches that can accommodate a combination of educator-guided instruction and child-directed activity (Siraj-Blatchford et al., 2003; National Research Council 2001).

4.4 The key to developing literacy, numeracy and inquiry skills is to match learning opportunities to the child's interests and abilities.

- Young children benefit from pedagogy that reinforces basic emerging literacy, numeracy and inquiry skills (National Early Literacy Panel, 2008; National Research Council, 2001; Siraj-Blatchford et al., 2003). Diamond and her colleagues (2007) found numeracy and literacy instruction that incorporated dramatic play, visual aids, and peer interaction had a powerful effect on the child's ability to screen out distractions and to think creatively and reflectively.

- Early language exposure predicts vocabulary growth and has a significant effect on later verbal skills (Huttenlocher, 1991; Hart & Risley, 1995) and literacy skills (Dickinson & Tabors, 2001; Hart & Risley, 1999; Snow, 2007). By age four, children in professional families have heard 30 million more words than children living in families on social assistance (Hart & Risley, 1995). When literacy, numeracy and inquiry materials are embedded within play settings in preschool, Kindergarten, and multi-age programs, children's use of literacy materials and engagement in literacy acts increase (Zigler, Singer, & Bishop-Josef, 2005. Educator-guided activities that engage children can foster particular aims in numeracy, literacy, inquiry and self-regulation of attention (Ginsburg, Lee, & Boyd, 2008.; Diamond et al., 2007; Barnett 2008; Snow, 2007).

- Shared reading (Snow, 2007) supports narrative development and later reading comprehension. Alphabetic principle (letter knowledge and phonological awareness) contributes to decoding skills which are important to long-term reading success (Bennett, 2005; Millard & Waese, 2007; National Early Literacy Panel, 2007; Neuman & Dickinson, 2001; Stanovich, 2000) and can be embedded in other typical early childhood program activities or can be presented in regular, short, isolated activities (Millard & Waese, 2007). Narrative development impacts literacy development and academic achievement (Dickinson & Tabors, 2001). Narrative skill is an area of oral language in which delays are less likely to resolve over time, even when children have mastered isolated code skills (Girolametto, Wiigs, Smyth, Weitzman, & Pearce, 2001; Manhardt & Rescorla, 2002).

- Early childhood programs provide extended, ongoing opportunities to support emerging and early reading skills through enhanced oral language and intentional adult interventions to sustain and extend the children's play (Bergen, 2006; Davies, Shanks & Davies, 2004). However, studies suggest that these opportunities may be minimal in many settings (Cleveland et al., 2006; Goelman, Doherty, Lero, LaGrange, & Tougas, 2000). In one Canadian study, examples of intentional pedagogy (e.g. reading aloud, vocabulary

building, letter identification, letter-word sounds) to support emergent literacy were infrequent (Perlman & Fletcher, 2008).

- Young children's informal mathematical knowledge is broad and complex. Children's experiences consolidate understanding about numbers and children can then begin to use a number line that is a prerequisite for addition, subtraction, multiplication, and division (Case, Griffin, & Kelly, 1999; National Research Council, 2001). Activities that involve games that use a number line, one-one correspondence, and counting (for example, simplified variations of Snakes and Ladders), help children master and integrate understanding about numbers (National Research Council, 2001).

- Scientific reasoning begins in infancy (Gopnik, Meltzoff, & Kuhl, 1999). Children have opportunities for sustained interactions with other children and adults that encourage episodes in which two or more individuals engage with each other to solve a problem. Open-ended questioning is guided by educators with an understanding of early childhood development (Siraj-Blatchford & Silva, 2004).

4.5 Physical activity is essential to early learning and healthy development.

- Children require regular, frequent opportunities for physical movement. Children in primary schools with recess periods of at least 15 minutes are more focused during class time and display fewer disruptive behaviours (Barros, Silver, & Stein, 2009).

- Opportunities for physically active play, including play-fighting, helps children, especially boys, manage aggressive reactions (Tremblay et al., 2008).

- Physical activity levels are diminishing amongst preschool and school-age children, creating long-term health problems (Leitch, 2008).

4.6 Play is pedagogy that can accelerate early learning.

- Play engages children's natural curiosity and exuberance and promotes learning (Berk & Winlser, 1995; Kagan & Britto, 2005; Kagan & Lowenstein, 2004; Greenspan & Shanker, 2004; Hirsch-Pasek, Golinkoff, Berk & Singer, 2008). Children who thrive in primary school and whose pathways are set for later academic success are those who enter Grade 1 with strong oral communication skills, are confident, able to make friends, are persistent and creative in completing tasks and solving problems, and are excited to learn (Shonkoff & Phillips, 2000; Bennett, 2005; National Research Council, 2001; Sylva et al., 2004; Maggi,

Irwin, Siddiqi, Pureslami, Hertzman, & Hertzman, 2005; Barnett, Yarosz, Thomas, & Hornbeck, 2006; Zigler, Singer & Bishop-Josef, 2005; Kagan & Lowenstein, 2004). These are the same qualities that children strengthen through high quality play during their early years. Guided play and playful learning are essential elements of effective preschool and Kindergarten programs (Ginsberg et al., 2008; Hirsh-Pasek et al., 2008 Hewes, 2006; Fromberg, 2006; Miller & Almon, 2009). A Canadian review of the pedagogy of play views children as independent agents who can have an active role in shaping their learning environments (Hewes, 2006).

- Pretend play is a form of communication that requires the pretenders to communicate with each other using language gestures and symbolic objects to tell and retell stories (Berk & Winsler, 1995). Cognitive research points to the role of pretend play in literacy acquisition (National Research Council, 2001; Neuman & Dickinson, 2001; Zigler et al., 2005). Symbolic play requires children to determine tasks and goals and to carry them out, which provides opportunities for narrative recall and use of complex language (Greenspan & Shanker, 2004; Snow, 2007). The ability to use narrative and more advanced oral language in pretend play is linked to later reading comprehension and fluency (Roskos & Christie, 2004; NICHD, 2005). Pretend play helps children develop schemas and scripts as organized mental structures that are applied to understanding print (Greenspan & Shanker, 2004). Problems to be solved emerge in preschool pretend play (Miller & Almon, 2009; Hirsh-Pasek et al., 2008). The relationships between pretending and the development of mental representation have been studied extensively (Astington, 2004; Bergen 2006; Schwebel, Rosen, & Singer, 1999). Children's abilities for joint planning and role assignments during pretend play expand (Moses & Carlson, 2004).

- Play environments in early childhood programs support children's ability to regulate emotions, get along with others, resolve conflicts and develop skills in negotiating social situations (Fromberg, 2006; Shonkoff & Phillips, 2000; Diamond et al., 2007). By age five, children who are disruptive or aggressive tend to be rejected by their classmates and have more conflict-ridden relationships with their teachers (Hirsh-Pasek et al., 2008 Trembley et al., 2008). Play-based environments contribute to social competence, emotional and attention self-regulation and the ability to communicate with others (Barnett et al., 2006; Zigler et al., 2005; Kagan & Lowenstein, 2004).

5. Professional education and development and appropriate working conditions are essential for a knowledgeable and responsive workforce.

5.1 Knowledgeable and responsive educators are central to effective early childhood programs.

- Reflective and responsive educators establish early childhood programs as learning environments (Barnett, 2008; Siraj-Blatchford et al., 2003; Cleveland et al., 2006; Colley, 2006; Mitchell et al., 2008; Shonkoff & Phillips, 2000; Victorian Curriculum and Assessment Authority, 2008). Educators require an understanding of the sequence of development - social, emotional, cognitive, linguistic and physical, including knowledge of the literacy and numeracy continua (Guarino, Hamilton, Lockwood, Rathburn, & Hausken, 2006). Educators who implement a planned curriculum with goals for children's learning and development largely determine the quality of early childhood settings (Cleveland et al., 2006; OECD, 2006; Victorian Curriculum and Assessment Authority, 2008). Educators in effective early childhood programs regularly engage in adult-child interactions that challenge, encourage joint attention and negotiate sustained shared thinking (Mitchell et al., 2008; Siraj-Blatchford et al., 2003; Victorian Curriculum and Assessment Authority, 2008). American studies of pre-Kindergarten programs found that children showed larger gains in academic outcomes when they experienced higher-quality pedagogy or closer teacher-child relationships (Howes, Burchinal, Pianta, Bryant, Early, Clifford, & Barbarin, 2008).

- Reviews of American, Canadian, Australian and New Zealand studies consistently report that educator qualifications, adult-child ratios and group size influence educators' interactions with children and quality in public and private child care settings (Bloom, Moos, Hachey, & Cressman, 2006; Clarke-Stewart & Alluhsen, 2005; Cleveland et al., 2006; Goelman, Anderson, Kershaw, & Mort, 2008; Mitchell et al., 2008). Typically, as educators' years of training/education increase, the child/staff ratio decreases (OECD, 2006; Siraj-Blatchford et al., 2007). Educators working with younger children and in programs operated outside of public education have less education and receive lower rates of remuneration (OECD, 2006). Standards for privately-operated programs (non-profit and commercial) tend to be lower and less rigorously monitored and assessed, particularly for younger children (OECD, 2006).

- Preschool and Kindergarten classes of no more than 20 children and no more than 10 children respectively for teacher/early childhood programs demonstrate increased benefits for children (Barnett, 2008; National Research Council, 2001; Barnett & Bocock 1998; NICHD Early Childhood Research Network, 2001). In American pre-Kindergarten programs, three- and four-year-old children are more likely to be expelled from programs with high student-teacher ratios and in extended day programs that wrap around (Gilliam, 2008). In a sample of American classrooms, smaller Kindergarten class sizes are associated with greater social and academic gains among Kindergarten children (Barnett, 2008). A comprehensive review of the impact of class size reduction in Canadian, American, British, New Zealand, Australian and Dutch school settings finds that class size reduction may help improve student achievement on standardized tests and decrease negative behaviour, but the results are mixed (Canadian Education Association, 2008).

Class size reduction seems to be effective only when teachers change their practices and are supported by professional development and may be more significant for pre-Kindergarten and Kindergarten children than for older children (Whelan, 2009).

- To create effective, responsive environments for children, educators require an infrastructure of support, with working conditions that facilitate quality (Beach & Rochon, 2007; Best Start Expert Panel on Quality and Human Resources, 2007). Educators with time for program planning, observation and documentation, opportunities for professional development and regular conversations with families are better able to support optimum child outcomes (Beach, Forer, Michal, & Tougas, 2004; Bertrand & Michels, 2007; Goelman et al., 2000; Lero & Irwin, 2008 Victorian Curriculum and Assessment Authority, 2008).

5.2 Evidence and support is mounting for degree-level qualifications, with an early childhood specialization.

- Research studies and policy reports are consistent in recommending a university degree with a concentration on early childhood education and development or the equivalent for at least some of the staff working with young children in early childhood settings (Ackerman & Barnett, 2006; Barnett, 2003; Barnett & Bobcock, 1998; Beach & Rochon, 2007; Burchinal, Cryer, Clifford, & Howes, 2002; Frede, 1998; McCain et al. , 2007; National Research Council, 2001; Best Start Expert Panel on Quality and Human Resources, 2007; Siraj-Blatchford et al., 2003; Whitebook, Howes, & Philips, 1990; Zigler, Gilliam, & Jones, 2006).

- Overall, studies show the importance of not simply more education, but specifically how the requirement of a bachelor's degree with specialized early childhood training can be used to develop high quality centre-based pre-Kindergarten programs (Whitebook, 2003). Educators with degree level qualifications in early child development/education are reported to be the most effective educators in early childhood programs (Whitebook 2003; Barnett 2003). Educators with early childhood education degrees rated higher in positive interaction with children than those without these credentials, and were less detached, less authoritarian and less punitive (Whitebook, 2003). Children who had teachers with a bachelor's or associate's credential in early childhood education demonstrated stronger receptive vocabularies that those with teachers holding only a high school diploma (Whitebook, Bellm, Lee, & Sakai, 2005). Retaining the greatest number of teachers with bachelor's degrees or more was the strongest predictor of whether a centre maintained a high level of quality over time.

- There is a debate within the field in the United States on the necessity of the undergraduate university degree for educators in early childhood programs (Early, Maxwell, Burchinal, Alva, Bender, & Bryant, 2007; Whitebook, Gomby, Bellm, Sakai, & Kipnis, 2009). A meta-analysis conducted by American researchers Kelley and Camilli (2007) showed modest average effects associated with early childhood programs requiring a university degree. The research underlying the effect size is correlational in nature. Thus it is possible that any number of factors such as higher compensation rates, pedagogical leadership and a coherent curriculum caused this effect. In one study, gains in children's achievement were not related to structural characteristics of the child or program (i.e., ratio, teacher qualifications and program location and length), but to the knowledge and responsiveness of the educators (Howes, Burchinal, Pianta, Bryant, Early, Clifford, & Barbarin 2008). Findings from a pilot project conducted within the Ottawa-Carleton Board of Education provide preliminary evidence to suggest that children in Junior Kindergarten taught by qualified educators with a two-year early childhood education diploma are not differentiable in terms of their social and cognitive skill acquisition from children taught by certified teachers (Coplan Wichman, Lagace-Seguin, Rachlis, & McVey, 1999).

- The OECD (2004) noted that although Kindergarten teachers in Canada and elsewhere are required to complete a university degree and receive, in general, practical training in the delivery of a curriculum, Kindergarten teachers typically did not receive specific enough training for this age group. The OECD suggested that obtaining a university degree tends to hide the fact that the degree in question may not carry a significant module of early childhood theory or training. It is problematic to have teachers working in Kindergarten who have not been trained for the role – even if they receive a top-up or in-service training course – particularly if – as has happened in several provinces – that role includes teaching in Junior Kindergarten (OECD, 2004). The OECD was also critical of levels of training in child care settings where educators work in smaller settings and the central focus may not be on early learning. There is usually no wider professional reference group for child care staff or a tradition of professional development.

- Cameron (2002) presents a vision that by 2020 the early childhood workforce in the United Kingdom will mainly be educated to university degree level and will be capable of meeting the challenges of working in highly complex environments, where children's learning is highly valued and there is a demand for a high level of skills and knowledge. The current split between 'teachers' and 'childcare workers' will be rethought around a model of an integrated educator who employs a holistic, pedagogical approach. When early childhood programs collaborate with other early childhood programs, the staff benefit from harmonization of professional education and development (Colley, 2006; Corter et al., 2006; Best Start Expert Panel on Quality and Human Resources, 2007; Best Start Expert Panel on Early Learning, 2007).The findings from the school-based sites at Toronto First Duty report that educators (including Kindergarten teachers, early childhood educators,

parenting workers, family resource program staff and educational assistants) found positive professional benefits, including role redefinition and exposure to a broader knowledge base, through the integration of child care with other early childhood settings (Corter et al., 2006; Corter et al., 2008).

5.3 Strong leadership and consistent staff are important components of effective early childhood programs.

- Effective leadership practice in early childhood programs includes pedagogical and curriculum leadership and outreach to families and communities, (Siraj-Blatchford & Manni, 2007; Bertrand & Michals, 2007; Best Start Quality and Human Resources Expert Panel, 2007; Bennett 2008) in addition to necessary financial and human resources management skills. Pedagogical leadership, in addition to program management, contributes to good practice (Siraj-Blatchford, et al., 2003; Bertrand & Michals, 2007) and encourages staff stability (Whitebook & Sakai, 2004).

- Appropriate training for leadership roles is a critical element in providing high quality early childhood programs, particularly as more complex, multi-professional teams of staff come together to provide more integrated programs (Siraj-Blatchford & Manni, 2007; Corter et al., 2006).

- Principals are expected to be leaders of learning, knowledgeable about curriculum and pedagogy and able to assess, develop teacher skills and provide working conditions for teachers that allow them to practice their profession (Phillips, 2003; National Association of Elementary School Principals and Collaborative Communications Group 2005; Mort, 2007; McElgunn, 2006). This reflects the same kind of leadership early childhood educators need in child care programs.

5.4 Effective professional education and development depends on joint efforts by post-secondary education institutions and professional organizations and institutions.

- Teacher education programs and early childhood educator preparation programs include opportunities for practice in programs with young children (Best Start Expert Panel on Quality and Human Resources, 2007; Whitebook et al., 2009). The required time for practice teaching in teacher education programs varies from eight weeks in Ontario to twelve weeks in Nova Scotia, British Columbia and Saskatchewan, although individual university programs may give students more practical experience (Education Quality & Accountability Office, 2000).

- Professional education programs and professional development opportunities should provide necessary tools for the more challenging aspects central to effective early learning (Whitebook et al., 2009). In a comprehensive study of California preschool programs, early childhood staff were typically successful in providing engaging, emotionally supportive and well-managed environments, but they were less successful in promoting higher-order thinking, providing effective feedback and developing children's language skills (Karoly, Ghosh-Dastidar, Zellman, Perlman, & Fernyhough, 2008).

- In the United States, the rising demand for degree-level educators is creating the need to assess the capacity of post-secondary education to meet rising demands for teacher preparation (Whitebook, 2004; Whitebook et al., 2009).

- A Canadian study of post-secondary ECE programs identified the need for more attention to children with special needs, working with parents and cultural diversity (Beach et al., 2004). A comprehensive review of competencies for post-secondary ECE programs in California identified family cultural diversity, dual language learning, and the care and education of children with special needs as areas that needed more focus in establishing standards for professional education programs (Centre for the Study of Child Care Employment, 2008).

- The effectiveness of professional development for educators who are working in programs varies. The early childhood sector is a complex and challenging arena for professional development provision (Cherrington & Wansbrough, 2007; Beach & Rochon, 2007). Effective professional development programs are based on research, underpinned by current theoretical perspectives (both content and delivery methods) and are sustained over a period of time (Cherrington & Wansbrough, 2007; Beach & Rochon, 2007; Flowers, Girolametto Weistzman, & Greenberg, 2007).

5.5 Professional education and development can provide multiple pathways to preparing effective early childhood professionals for working with young children and families in early childhood programs.

- Prior Learning and Assessment Recognition (PLAR) is often identified as a strategy to recognize child care staff who do not have formal credentials or who have credentials from outside Canada that are not recognized, but reports document challenges that students and institutions face in PLAR implementation (Beach et al., 2004; Arscott, Crowther, Young, & Ungarian, 2006). Other reports have indicated that PLAR is more successful in ECE post-secondary programs than in many others (Aarts, Blower, Burke, Conlin,

Lamarre, & McCrossan, 2003; Wihak, 2005). The majority of PLAR learners do not identify with designated minority groups, such as Aboriginal, recent immigrant, English as a second language or visible minority (Aarts et al., 2003). The relatively new bridging program for internationally trained educators in Toronto, Ontario shows some promise for more recognition of foreign credentials (Beach & Rochon, 2007). Athabasca University successfully used PLAR with ECE students, reducing their length of study (Arscott et al., 2006). The project also developed tools for use in post-secondary ECE programs in four different jurisdictions.

- Quebec has increased both the quantity and quality of early childhood programs, creating a need for additional ECEs (Japel & Welp, 2009). An existing attestation (equivalency) program that 'fast-tracked' credentials for individuals with working experience in early childhood programs expanded as one of the sponsored welfare-manpower programs. Individuals within Quebec's CEGEPs have expressed concerns that the 'fast-tracked' credentials are not adequately preparing educators (Beach & Rochon, 2007).

- In 2000, teachers working in New Jersey state-funded pre-Kindergartens operated by public schools, private centres, and Head Start centres were mandated by the court to obtain a BA and Pre-Kindergarten to Grade 3 certification by 2004 (Frede, Jung, Barnett, Lamy, & Figueras, 2007). The state responded with scholarships and funding towards salary parity for educators in private programs with those delivering pre-Kindergarten within the public education system. Postsecondary institutions received financial support to develop the programs and provide a variety of delivery options to meet the needs of educators. After four years, approximately 90 per cent of the preschool teachers had met the court's mandate.

6. Convenient, well-designed early childhood program facilities accommodate young children and families.

6.1 Provincial/territorial child care regulations include space specifications, while school operated Kindergarten programs are governed by education legislation that has few space requirements.

- Child care regulations across jurisdictions show that all provinces and territories have minimum indoor space requirements (Friendly, Doherty, & Beach, 2005). The requirements range from less than three square metres/child in five provinces/territories: Nova Scotia, Northwest Territories and Nunavut, and for children 18 months and older in Quebec (2.75 square metres per child), and Ontario (2.8 square metres per child), to four square metres in the Yukon. All provinces and territories have some specification for children's bathroom facilities. Most provinces/territories do not require a child care centre to have a kitchen.

Quebec requires a kitchen, or at least a kitchenette, and a fridge and range or hot plate. Saskatchewan requires access to kitchen facilities. Ontario, Saskatchewan and the Yukon require designated spaces for children to eat. Newfoundland and Labrador is the only jurisdiction that requires the outdoor play space to be on site. Ontario requires it to be adjacent to the premises. All provinces/territories except Newfoundland and Labrador have specific outdoor space requirements.

6.2 The quality and location of facilities can encourage enrolment, parent involvement, and staff recruitment and retention.

- The organization and design of the physical space can encourage utilization and parent involvement (Friendly, Doherty, & Beach, 2005). To encourage wide utilization, facilities need to appeal to parents who want their children to attend safe, physically attractive, and well-maintained environments.

- Programs should be located where parents will use the services: near homes, workplaces, and commuting routes (Susman & Gillman, 2007).

6.3 School locations can provide a supportive infrastructure, encourage family involvement and promote collaboration with other school and early childhood programs in the community.

- Schools can play a pivotal role in creating and sponsoring early childhood programs in concert with other community organizations (Mort, 2006; Williams, 2006; National Association of Elementary School Principals and Collaborative Communications Group, 2005; McCain et al., 2007). With school enrolment now declining in most of Canada, the neighbourhood elementary school is a logical site for the establishment of local early childhood centres (Wolanski, 2008; Whiteland, 2006).

- Locating early childhood programs in schools and aligning their operation to schools encourages increased family involvement and utilization. The link between early childhood programs and schools is a major first step in hearing from, and involving parents, in early childhood education and in building capacity for lifelong home-school-service community relations (Corter et al., 2008). School-based programs are typically accessible to families within their own neighbourhoods and communities. Toronto First Duty reported that most families learned about early childhood programs through neighbourhood word-of-mouth and through school communications (Corter et al., 2006). Better Beginnings, Better Futures reported that school-based drop-in programs were more widely accessed by young children and their families than were the same programs when delivered in other settings (Peters et al., 2004).

- Early childhood programs within schools make effective use of established publicly funded assets. Early childhood programs within schools can benefit from the infrastructure of libraries, technology, support staff, gym and extended community that schools provide. The recent OECD report on Canadian early childhood programs noted that Kindergarten classrooms provided suitable physical environments for early learning (OECD, 2006). In the United Kingdom, primary schools with a strong commitment to communities and early childhood programs provide suitable locations for integrated program delivery (Bertram et al., 2003).

- Schools exist in local communities, have space that is adaptable to early childhood programs and facilitate the integration of programs into the education system (McCain & Mustard, 1999; Cummings, Dyson, & Todd, 2004; Mort 2004, 2008, 2009). In British Columbia, the involvement of schools in early child development (through use of the community measure, Early Development Instrument), led to new school-based early childhood programs, often delivered in collaboration with local community programs (Mort, 2009).

- Children's successful transitions from preschool programs to Kindergarten and/or Grade 1 programs are promoted when there is a strong and equal partnership between primary education and early childhood programs (OECD 2001, 2006; Reynolds & Temple, 2008). Such a partnership includes a pedagogical approach that is consistent across settings and continues into the early grades of primary school (Bennett, 2008). The sequential educational processes of the primary school join up with the holistic, inquiry-based approaches prevalent in most early childhood programs. When early childhood programs are within, or linked to, schools and school systems, children's transition into formal schooling is better supported (Wolanski 2008; Corter et al., 2007).

- School funding restrictions can limit possibilities to expand efforts to deliver early childhood programs within school facilities (Siraj-Blatchford, Sylva, Laugharen, Milton, & Charles, 2007; Whitebook, Ryan, Kipnis, & Sakai, 2008).

- Schools provide a space and place to promote collaboration and integration. Schools can become a platform for the delivery of a range of services, including public health and early intervention services (Williams, 2006; McCain et al., 2007; Schorr, 1998). Toronto First Duty found that early childhood programs that are linked to schools and the delivery of preschool, child care and/or Kindergarten programs are more effective portals for parent education, information and referrals (Corter et al., 2006). The school-based family drop-in programs in Peel became 'hubs' that were able to connect families with other services and

programs in the community and to connect children and families with additional services available through the school (Wolanski, 2008).

7. Young children and families benefit most from comprehensive, effective early childhood programs.

7.1 Effective early childhood programs benefit all children's development and learning.

- The three major longitudinal studies - the 1970 British Birth Cohort (Osburn & Milbank 1987); the Effective Provision of Pre-School Education (EPPE) Project (Sylva et al., 2004; Slyva et al., 2009); and the Competent Children at 12 in New Zealand (Wylie, 2004) - report that high quality early childhood programs before age 5 are related to better social and cognitive outcomes for all children, regardless of socioeconomic (SES) background. The 1957 and 1970 British Birth Cohort studies (Osburn & Milbank, 1987) and New Zealand's Competent Children studies (Hodgen, 2007) indicate that these benefits have a long reach into adolescence and adulthood. Similar findings are reported from National Institute for Child Health and Development (NICHD) studies in the United States (NICHD-Early Child Care Research Network, 2001, 2004a, 2004b). Numerous empirical research studies in the United States show that all children (from low, middle and high income families) benefit from pre-Kindergarten programs for 3- and 4-year-old children and that the benefits are greater in higher quality pre-Kindergarten programs (Ackerman & Barnett, 2006; Barnett, 2008; Lynch, 2007; Miller & Almon, 2009).

- While participation in early childhood programs benefit all children, their impact on social competence and academic attainment is particularly significant for children living in disadvantaged families and communities (Cleveland et al., 2006; Isaacs, 2008; Karoly, Kilburn, & Cannon, 2005; Reynolds & Temple, 2008; Stephen, 2006; Sylva et al., 2009; Whelan, 2009).

7.2 Full-day Kindergarten programs promote children's early learning and development.

- Several quasi-experimental and descriptive studies have compared the benefits of full-day versus half-day Kindergarten programs, and the evidence suggests that increased access to full-day Kindergarten can result in an initial and relatively immediate payoff in greater academic achievement and social success (Ackerman, Barnett, & Robin, 2005; Baskett, Bryant, White, & Rhoads, 2005; da Costa & Bell, 2000, 2001; DeCesare, 2004; Herry, Maltais, & Thompson, 2007; Nelson, 2000; Plucker et al., 2004; Robin, Frede, & Barnett, 2006; Walston & West, 2004). Results from Edmonton full-day Kindergarten programs reported that children with lower levels of reading and writing skills were able to catch up to

the other children who attended only half-day Kindergarten. (da Costa & Bell, 2001). The Northern Lights School Division in Alberta reported similar results (Colley, 2006). Collectively, American and Canadian studies indicate that full-day Kindergarten offers continuity for children accustomed to full-day experiences outside of the home, continuity with schedules in first grade and beyond, and reductions in the number of disruptions and transitions children experience in a typical day. It also allows more time for both formal and informal instruction that provides meaningful learning opportunities. Full-day Kindergarten provides an opportunity to align the policies and practices of the grades that follow Kindergarten with those of the early learning programs that typically come before.

- A number of studies examining the impact of full-day Kindergarten in the United States drew on data from the Early Childhood Longitudinal Study, Kindergarten Class (Le, Kirby, Barney, Setodji, & Gershwin, 2006; Magnuson, Ruhm, & Waldfolgel, 2006; National Center for Educational Statistics, 2004; West, Denton, Germino-Hausken, 2000). Le et al. (2006) reported full-day Kindergarten had no impact on academic achievement in Grade 5 and a negative impact on non-academic skills related to self-regulation of behaviour and attention. However, the study did not control for selection bias, program quality or private and public delivery. Other analyses point out that children in public school full-day Kindergarten programs do better than children in public half-day Kindergarten programs; however, when children attend private (non-profit and commercial) half-day and full-day programs, the full-day/half-day differences disappear (National Center for Educational Statistics, 2004).

- A policy overview of full-day Kindergarten in the United States (Kauerz, 2005) identified four key areas where states need to strengthen their full-day Kindergarten policies including definitional clarity, universal access, adequate funding and quality.

7.3 Children benefit from participation in pre-Kindergarten/Junior Kindergarten programs.

- In the United States, approximately 24 per cent of all 4-year-old children and 4 per cent of all 3-year-old children are attending state-funded preschool programs (Barnett et al., 2009). Several studies of pre-Kindergarten programs report that children who attend are improving in language, literacy, and math at least through the end of their Kindergarten year (Barnett, 2008; Frede et al., 2007). Children who attend preschool for two years at both age 3 and 4 significantly out-perform those who attend for only one year at 4 years of age or who do not attend at all (Frede, et al., 2007). A study of the impact of pre-Kindergarten on children's outcomes in a sample of five states reports positive effects on children's cognitive skills, although the magnitude of these effects varied by state and by outcome (Wong, Cook, Barnett, & Jung, 2008). State-funded, school-based universal pre-

Kindergarten programs report benefits for all children (Gormley, Gayer, Phillips, & Dawson, 2005).

- Pagani and colleagues (2003) used the NLSCY data to compare areas of Canada with and without four-year-old Kindergarten programs, with statistical controls, and found no advantage for children on a variety of behavioural outcomes. However, the sample does not control for quality or participation in other early childhood programming.

7.4 Effective child care programs provide educational or developmental experiences while accommodating the non-parental care needs of families.

- Research on the influence of child care on children's development consistently confirms that children in high quality programs compared to those in low quality care have better social skills (Cleveland et al., 2006; Peisner-Feinberg & Burchinal, 1997; Vandell, 1999); fewer problem behaviours (Vandell, 1999); better language skills (Clarke-Stewart, 1999; Peisner-Feinberg & Burchinal, 1997); and higher scores on measures of school readiness (Shonkoff & Phillips, 2000). The effects of the quality of child care received by children in the preschool years affects children's subsequent language and math skills and peer relationships in Grade 2 (Peisner-Feinberg et al., 1999).

- Early childhood programs that offer full-year, full-time options support the ability of parents to earn a living without compromising children's early experiences (Baker, Gruber, & Milligan, 2005; Clarke-Stewart & Allhusen, 2005; Cleveland et al., 2006; NICHD – Early Child Care Research Network 2004a, 2004b; OECD, 2006). Families with young children and society need social policies and institutions that allow parents to participate fully in the labour market, earning a living and seeking individual fulfillment, while providing the best care and education for their children (Adema, 2006; OECD, 2006).

7.5 Family support activities are most effective when program delivery explicitly supports parenting and early education.

- Family involvement studies in early childhood settings illustrate an array of different program types (Cleveland et al., 2006). They include home- and centre-based programs and activities that aim to support families and parents to improve children's early environments and outcomes. The clearest effects seem to be when programming for parents and other caregivers is combined with programming for their young children. Engaging parents and other family members in children's activities connects them to their

children's early development and supports the child's learning (Corter & Pelletier, 2005 Mort, 2008).

- Two-generation (involving parents/other caregivers and children) initiatives vary in their emphasis on parental and child-focused programming. Parenting programs that are designed solely to change parental knowledge or attitudes do not appear to translate into improved outcomes for children (Centre for Community Child Health, 2007; Goodson, 2005). Programs offering both a parent and a child component seem to be the most effective in promoting long-term developmental gains, particularly for children living in disadvantaged families (Shonkoff & Phillips, 2000). Although parent/family-focused interventions may benefit parents by increasing self-confidence or social networks, targeting children's development indirectly through attempts to change parenting style and/or improve parental education generally has negligible effects on children's development. Effective family drop-in programs are structured to intentionally provide opportunities for children's early learning and to support parenting skills (Barlow et al., 2007; Doherty, 2007; Graue, Clements, Reynolds, & Niles, 2004; Peters et al., 2004 Henrich, Ginicola, & Finn-Stevenson, 2006; Corter et al., 2006; Pelletier & Corter, 2005; Evangalou, Brooks, Smith, & Jennings, 2005). The ones that had positive outcomes for children were the ones that did have a specific focus and program structure to support early learning goals (Barlow et al., 2007).

- Evaluations of Canada's Community Action Plan for Children (CAPC) reported similar results. The pan-Canada evaluation involved families from different CAPC sites across Canada and a comparison group of matched families. No statistically significant differences in the health and functioning of the families were found (Boyle and Willms, 2002). CAPC sites vary in their primary objectives, the mix of services they provide and the degree of emphasis they put on each service, and this variation was not taken into account in the analysis. A subsequent analysis of the same data (Palacio-Quinton, 2002 in Doherty, 2007) found that CAPC programs in which children participated, either on their own or with their parents, were associated with enhanced child development, while CAPC programs directed at parents had the least effect on children's developmental outcomes.

- International systematic reviews of evidence support the use of a range of parenting interventions which start during the postnatal period, continue through infancy and early childhood, have a theoretical basis and are goal-driven with a specific curriculum (Barlow, Kirkpatrick, Wood, Ball, & Stewart-Brown, 2007). Parents want opportunities to connect with other parents and learn about child development and early learning (Mort, 2007; Corter et al., 2006). A large United Kingdom survey of parents with young children (National Academy for Parenting Practitioners, 2007) found parents were particularly interested in drop-in centres and interactive websites.

7.6 Home visiting programs have expanded across Canada over the past two decades.

- Building on the longstanding tradition of public health visits to families with newborns, home visiting is typically attached to the delivery of public health programs. Home visiting varies in terms of primary goals, theoretical underpinnings, populations served, background, training and supervision of service-providers, and duration and intensity of interventions (Fordham, 2005; Petitclerc, 2008).

- Most home visiting programs are intended to improve children's health and developmental outcomes and reduce child abuse and neglect by altering parental behaviours and parent-child interaction (Council on Canadian Pediatrics, 2009; Petitclerc, 2008). Some home visiting programs are universal, but most programs are directed towards families with children at risk for poor health and development outcomes.

- Recent reviews have raised concern about the quality and impact of many of the home visitation efforts being disseminated across the United States and Canada (Gomby, 2005; Daro, 2006; Daro, 2005). In part, the findings from home visiting studies are measured against unrealistic expectations (Daro, 2005). Home visiting programs that are closely aligned with a platform of programs for young children and families that can function as a broad outreach, may be most effective in promoting early childhood developmental goals (Council on Community Pediatrics, 2009; Daro, 2005).

- Parent-support and parent-training programs designed to help parents develop positive skills and behaviours can be delivered through home visits (McCain et al., , 2007; Shonkoff & Phillips, 2000). Home visits can also provide information to parents on their child's development, model effective parenting practices, link parents to community early childhood programs and provide a social network for families (McCain et al., 2007; Shonkoff & Phillips, 2000).

7.7 Social and academic benefits gained from participation in early childhood programs can be better retained when children are supported by organized, effective after-school programming.

- Children, particularly those living in lower income families and communities, benefit when summer programs provide opportunities for continued learning (Miller, 2007).

- Longitudinal studies of the Chicago Child-Parent Centres show that implementing an integrated pre-Kindergarten to Grade 3 approach contributes significantly to sustaining and

enhancing the achievement gains seen in high quality, stand-alone pre-Kindergarten programs (Foundation for Child Development, 2006).

7.8 Consolidated, universal early childhood program delivery maximizes benefits to children and families.

- The OECD review concluded that any model for care and education of young children must take into account the need to link with both an integrated early learning and care system for children from 0 to 6 as well as to the compulsory education system. Partnerships between the early childhood sector and the education system provide the opportunity to bring together the diverse perspectives and methods of both early childhood programs and schools (OECD, 2001). The 1998 Canadian study of child care and Kindergarten for four- and five-year-old children reported that three-quarters of parents supported a combination of full-day, year-round care and education programs through the school system (Johnson & Mathien, 1998).

- Strong Start Local Programmes (SSLP) in the United Kingdom report benefits (including child outcomes and parenting skills) for participating children and families (National Evaluation of Sure Start Research Team, 2008). Earlier findings had found fewer benefits. Researchers suggest the expansion of integrated program delivery (including full-day, full-year options) through Children's Centres is a contributing factor (Siraj-Blatchford & Siraj-Blatchford, 2009).

- Several reports on early intervention services for children with developmental or emotional health challenges recognize that they are disjointed, challenging for families to navigate and often overly professionalized (Boydell, Bullock, & Boering, 2009; Browne, Byrne, Roberts, Gafni, & Whittaker, 2001; Shonkoff & Phillips, 2000). Recommendations call for the integration of specialized services for children and youth with clear alignments to early childhood programs and to the education system. (Brooks-Gunn, 2003; Boydell, Bullock, & Goering, 2009).

- One-quarter of children in Canada are vulnerable when they enter Grade 1. They have learning, health and behavioural problems that are likely to interfere with their academic achievement and ability to get along with others (Willms, 2002; Kershaw et al., 2006; Janus, 2006; Janus & Duku, 2007; Canadian Council on Learning, 2008). Striking disparities in abilities exist among different children according to different markers of development (Janus & Duku, 2007; Forget-Dubois, Lemelin, Boivin, & Dionne, 2007; Willms, 2002). These disparities are associated with differences in children's circumstances and experiences in the early years, including their participation in early

childhood programs (Sylva et al., 2009). Furthermore, early differences among children are predictive of future academic and life trajectories (Lloyd & Hertzman, 2008). Children from low-income groups may have a greater risk of difficulties, however, the majority of vulnerable children are actually found in middle-income and affluent families (Willms, 2002; Hertzman & Bertrand, 2007). While the likelihood of developmental, mental and physical health and learning problems may be higher within a higher risk population, the actual numbers of individuals who develop a disorder or significant problem behaviour may actually be higher in the more numerous lower risk populations (Offord, 2001). Variations in early childhood experiences are manifested in disparities in school readiness, and these gaps often persist (Hertzman, 2008; Karoly, Kilbourn, & Cannon, 2005; Kilburn & Karoly, 2008).

- The blend of universal programs (for example, child care, Kindergarten and family support programs) and targeted services (for example, family literacy programs in disadvantaged communities, home-visiting for parents with identified risk factors or enriched school readiness summer camps) provide an effective platform to support all children and families without labeling and stigmatization (Barnett et al., 2007; Centre for Community Child Health, 2006; Doherty, 2008; Offord et al., 1998). Universal program delivery of targeted interventions is particularly beneficial to disadvantaged children and families (Barnett, Brown, & Shore, 2004; Doherty, 2007; Karoly, Kilborn, & Cannon, 2005). Targeted services often use screening procedures that fail to identify many individuals who develop a particular problem. (Gillham, 2005). The universal platform can accommodate the delivery of some clinical services that are designed to treat identified mental or physical health, disability, family dysfunction, and drug abuse problems. Successful universal early childhood programs may have very small effects for the average participant, but the effects can add up to large effects for society (Barnett, Brown, & Shore, 2004; Committee for Economic Development, 2006; Karoly & Bigelow, 2005; Offord et al., 1998).

- Universal early childhood programs and policies that serve all children and families provide a stronger foundation for improving well-being than residual, targeted or segregated approaches. Research evidence from education, child development and population health studies and sectors points to universality as a necessary foundation for the inclusion of all children (Freiler & Zarnke, 2002; OECD, 2006; Doherty, 2007). American Head Start programs, the world's largest compensatory preschool initiative, does not reach most poor children and serves many children who are not poor (Barnett, Brown, & Shore, 2004). Canadian studies document the problems with targeting and demonstrate that interventions directed at disadvantaged neighbourhoods or populations often miss the majority of children at risk (Doherty, 2007; Willms, 2002). Eligible families will often shun targeted services to avoid the associated stigma (Hughes & McCuaig, 2000). Several studies suggest targeted approaches within universal early childhood programming are more effective in supporting disadvantaged families and communities than designated

targeted programs (McCain et al., 2007; Browne et al., 2001). Willms (2002, 2005) concluded that these strategies would both raise the bar for children's outcomes, and level it across different groups of children. Successful programs are open to all children and make particular efforts to reach out to marginalized children, families and communities (Browne et al., 2001). Studies report that quality universal early childhood programs can reduce inequities for disadvantaged children, particularly when targeted outreach efforts are put in place to ensure representation from all groups within a community (Elliott, 2006).

- Two types of transitions are central to children's daily lives: vertical transitions that are key points and/or processes that occur at turning points of life (i.e. birth, entry to formal schooling, entry to high school, graduation or early school leaving); and horizontal transitions that occur on a daily basis as children cross boundaries between home and early childhood programs or school (Volger, Crivello, & Woodhead, 2008). The organization of early childhood programs affects how young children experience daily transitions between programs and other care arrangements (Dockett & Perry, 2008). The relationship between early childhood programs and educational practices in schools contributes to children's academic success and social competence throughout their school years and beyond (Centre for Community Child Health, 2008a).

- Little is known about full alternating-day Kindergarten versus half-day every day Kindergarten, both of which are prevalent in Canada. (Cleveland et al., 2006). Also little is known about the impact of transitions between early childhood programs. Data from the NLSCY shows that almost 30 per cent of Canadian children, ages 0 to 6, are in more than one type of child care arrangement (Bushnik, 2006), which means young children must adapt and adjust to different environments and adults throughout the day or week. Children living in lower income families are more likely to be in more than one type of child care (Bushnik, 2006).

- Transition between any two phases of education poses challenges, particularly when it involves structural discontinuity (e.g. changes in provider or institution) and shifts in curriculum and pedagogy (Bennett, 2006; Stephen, 2006; Vogler, Cirvello, & Woodhead, 2008). Differences in curriculum between early childhood settings and Kindergarten account for many of the difficulties that children and their families experience when making the transition from early childhood settings to Kindergarten or Grade 1 in the school system (Centre for Community Child Health, 2008a; Dockett & Perry, 2008; Margetts, 2007). Young children often have to adjust to very different environments, expectations and cultures. Of equal concern, the relationship between preschool and school may be coordinated through 'schoolifying' the preschool. Working towards 'a strong and equal partnership' between early childhood and primary provision offers a more positive vision (OECD, 2006; Woodhead & Moss, 2007). The division between 'care' in child care centres and 'education' in Kindergarten is a focus for attention in several policy studies in Canada

and internationally. In most Canadian jurisdictions, the same children often participate in both systems at different times in the day. A review of the literature by Colley (2006) found the transitions between two environments are often disruptive for children and inconvenient and cumbersome for parents.

8. Governance structures are needed to merge the current array of fragmented early childhood programs into an early childhood system.

8.1 Jurisdictions coming late to the development of universal early childhood systems, such as New Zealand, the United Kingdom, Australia and the United States, attempt to build a system through the existing array of private (non-profit and commercial) and public program delivery structures already in place.

- Anglo jurisdictions (United Kingdom, Canada, United States, Australia and New Zealand) are using a combination of common curriculum, operating standards, and staffing qualifications to knit together a coherent approach and foster a synergy of cultures, while maintaining mixed delivery (OECD, 2006). Several jurisdictions, including the United Kingdom (OECD, 2006), Wales (Siraj-Blatchford et al., 2007), and New Jersey (Frede et al., 2007) are implementing joint curriculum or curriculum frameworks as the central strategy to support mixed program delivery of expanded early childhood programs.

- In Wales, the implementation of Foundation Phase, a curriculum framework organized around seven areas of learning for children aged three to seven years in 41 school-based early childhood programs, found the coordination of multiple service providers and local authorities complicated common training and support across different programs (Siraj-Blatchford et al., 2007). Quality measures indicated that the higher the proportion of trained staff, the higher the quality. The majority (85 per cent) of staff who participated in the pilot study agreed with the seven areas of learning as a broad and balanced basis for early learning and development, but there was confusion about the balance between play and direct instruction (Siraj-Blatchford et al., 2007).

- In the United States, provision of pre-Kindergarten programs within existing child care centres is seen to enhance the quality of a centre by providing new resources and by requiring that the centre meet state pre-Kindergarten standards that are generally stronger than state child care licensing requirements in areas such as teacher credentials (Shulman & Blank, 2007; Whitebook, Ryan, Kipnis, & Sakai, 2008). The process of engaging multiple public and private providers from a range of settings in service delivery can present significant challenges and requires significant investments in monitoring standards and infrastructure support (Schumacher, Ewen, Hart, & Lombardi, 2005; Whitebook, Ryan, Kipnis, & Sakai, 2008).The results are not promising in terms of equitable access

(Barnett, 2008; Adema 2006; Karoly et al., 2008) staffing and working conditions (OECD, 2006; Whitebook et al., 2008;) or quality (Sylva et al., 2009; Barnett, 2007; Karoly et al., 2008; Wong, Cook, Barnett, & Jong, 2008). In California, measures of quality were higher in public school pre-Kindergarten and California State preschools than they were in Head Start or private non-profit and commercial child care centres (Karoly et al., 2008).

- As a result of a 1998 state Supreme Court ruling, New Jersey offers universal, voluntary pre-Kindergarten for three- and four-year-olds in school districts where at least 40 per cent of the children qualified for subsidized lunch - about 25 per cent of three- and four-year-old children in the state (Frede et al., 2007). Extensive evaluation has found no differences between private child care centre, Head Start and public school delivery of pre-Kindergarten programs as measured by child outcomes (language, literacy and mathematics) in Kindergarten (Frede et al., 2007). Pre-Kindergarten programs operating in public schools and child care centres scored virtually the same across almost all measures of quality teaching practices. Standards are high, including early childhood teachers with degrees with some early childhood content, infrastructure supports for professional education and development, and the highest grant per child for pre-Kindergarten in the country (Barnett et al., 2007). The program has not been ramped up to state-wide universal delivery.

- Oklahoma adopted a universal approach to pre-Kindergarten and the majority of programs offered through public education have reported good outcomes for children (Barnett et al., 2007).

- A study of pre-Kindergarten staffing in California, Georgia, Chicago, New York and Texas found that teachers employed in publicly-operated programs attained more formal education, received higher wages and benefits and experienced greater job stability than did their counterparts in privately-operated programs (Bellm, Burton, Whitebook, Broatch, & Young, 2002). The salaries and turnover rates of pre-Kindergarten teachers in publicly operated programs more closely resemble those of K-12 teachers, while the characteristics of staff members in community- based pre-Kindergarten programs operated by private non-profit and for-profit groups tended to be higher and more closely resemble those of workers in child care centres.

- In Canada, the United Kingdom and the United States, increased funding for early learning and child care programs before formal entry to school has resulted in an expansion of commercial programs (Beach et al., 2009; Penn, 2007; Barnett et al., 2009). In Australia, a multi-national corporation established a dominant position in the child care market in less than a decade following the introduction of expanded public funding with few strings attached to guarantee quality (Cleveland, 2008). Commercial lobbying efforts in Australia

have ensured that regulations remain lower than those currently in place in Ontario for regulated child care programs. The Australian accreditation system has modest monitoring and enforcement capacity and must rely on extensive self-reporting. In OECD countries, inequitable access is far greater in jurisdictions where the private (non-profit and commercial) sector plays a larger role (Hasan, 2008).

- Moss (2007) suggests children's centres in the United Kingdom should be operated as public institutions that offer a range of programs to all families in local communities, irrespective of parental employment status.

- Coordinated and collaborative program delivery among services existing within different funding and regulatory requirements is costly - in human effort and financial expenditures - with fewer benefits than consolidated program delivery (Corter et al., 2006). Publicly funded, mixed delivery of preschool programs in California may have the potential to benefit children, but they are not designed to maximize this potential because of program fragmentation (Karoly, Reardon, & Cho, 2007).

8.2 Commercial operations are less likely to provide effective early childhood programs.

- Researchers in Canada and other countries consistently report that non-profit programs deliver higher quality services than those delivered in commercial or for-profit programs (Japel, Tremblay, & Cote, 2005; Mitchell, 2002; Mill, Bartlett, & White, 1997; Lyon & Canning, 1999; Goelman et al., 2000; Doherty, Friendly, & Forer, 2002; Cleveland, Forer, Hyatt, Japel, & Krashinsky, 2007). Analysis of data from Canadian studies of child care quality found consistent differences between profit and non-profit child care centres, even when controlling for resource differences (Cleveland & Krashinsky, 2005). A recent comparison of commercial, public and non-profit delivery of child care programs in the City of Toronto found that non-profit and public status are likely to deliver higher quality services than commercial programs, independent of differences in financial resources (Cleveland, 2008). Doherty, Friendly & Forer (2002) report that greater clarity in defining staff responsibilities, lower rates of staff turnover and the staff with higher ECE qualifications and wages are key factors that explain higher quality in non-profit child care programs than in for-profit ones.

8.3 Comprehensive, integrated early childhood programs require consolidated governance.

- The Integration Network Project (Colley, 2006) defines integration as both "structural and conceptual". Structural integration occurs when the child receives a range of services from

different programs without repeated registration procedures, waiting periods, and different philosophies, human resource practices and funding systems. Experiences from countries such as New Zealand and the United Kingdom indicate that a simple switch into one jurisdiction or ministry will not guarantee "integration". The "conceptual" aspect of integration is key to an effective integration process. Programs leave behind previous identities and become consolidated entities that incorporate options for extended days operating full year. After a national consultation process with leaders in early childhood and Kindergarten education, the Integration Network concluded that achieving integration of Kindergarten and child care services requires a major paradigm shift from the fragmented patchwork currently available to a coherent system of services for children as a right (Colley, 2006). Because both education and child care are in the provincial jurisdiction, specific strategies for change will ultimately have to be worked out in each province and territory.

- A study of governance and management structures and arrangements in integrated children's centres in the United Kingdom identified a school governing body or a Sure Start Local Programme Management Board structure as a local authority (SQW, 2006). Private (commercial or non-profit) structures were individually operated. The setting of the centre played a large role in determining the structure of governance adopted.

- Integrated program models demonstrate positive benefits, but they often remain on the margins of early childhood systems in mixed model delivery systems (Corter et al., 2008; Mustard, 2008; OECD, 2006; Peters et al., 2004; Siraj-Blatchford, 2006). The pull of existing service delivery structures outweighs the reported benefits of pilots. Piecing together a coherent funding and service delivery infrastructure from existing programs requires considerable effort and proactive leadership within and among governments (Johnson & Knitzer, 2006; Friendly, 2008). Coordination and collaborative efforts should begin with joint financial planning and allocation of resources if integration is the goal (Corter et al., 2008; Hasan, 2008; Johnson & Knitzer, 2006).

- In the United States, there are several examples of governance realignment to consolidate early childhood programs (Bennett, 2008). For example, Washington State consolidated several early childhood programs into a Department of Early Learning. Massachusetts merged the Department of Education's Office of School Readiness with the Office of Child Care Services. Georgia has created an integrated governmental Department of Early Care and Learning. There are emerging integrated governance structures to make early childhood policy and oversee its implementation (Neuman, 2005).

- When regulated child care and Kindergarten/pre-Kindergarten are governed by separate governance structures, the quality of the learning environment in the regulated child care

sector is weak due to lax requirements and low staff qualifications and working conditions, including remuneration (Bennett, 2008). The education sector is typically directed toward learning goals with high child-to-staff ratios and little attention to children's acquisition of learning strategies. The American proliferation of mini-programs has grown by happenstance, resulting in significant expenditures with little understanding of what is having an impact (Kirp, 2007).

8.4 Universal early childhood programs are typically publicly delivered under the authority of local and/or state/provincial authorities.

- The OECD report (2006) noted three structural barriers that give rise to policy incoherence, service fragmentation and reduced accountability. Multiple government departments - education, child care, health - have responsibility for young children, and each has a different conceptual framework. Different departments have distinct and often competing mandates. Overlapping responsibilities for funding and delivery by each level of government adds to the fragmentation. Bennett (2008) concludes that the type of governance structure in place has a significant impact on the coverage and quality of early childhood services within a country.

- In jurisdictions with well-developed early childhood systems, the predominant governance is a public one, either through the education system or through municipal/social welfare systems (OECD, 2006; Cleveland & Krashinsky, 2005, Friendly, 2008). Integrated systems, such as those found in the Nordic countries, offer affordable and comprehensive networks for all families needing services, and their approach to child development and learning is respectful of the young child's age, strengths and needs (Bennett, 2008).

- In Ontario, as in the rest of Canada (with the exception of Prince Edward Island), Kindergarten is a social responsibility, financed and delivered by government, with defined pedagogy, and is adequately staffed and resourced. In contrast, child care is a market service resulting in a patchwork of uncoordinated programs that are under-funded and frequently offer mediocre quality programs to children (OECD, 2004; Goelman et al., 2000).

- In jurisdictions with universal early childhood programs, private alternatives may exist, but the predominant delivery system is public. Ministerial responsibilities for early childhood are reflected in a single policy and funding framework which supports and directs the local planning and management of early childhood centres (OECD, 2006; Siddiqi, Irwin, & Hertzman, 2007). Support includes legislated standards, planning, capital & operational

funding, human resources training and development, research, data collection and assessment (Siddiqi et al., 2007).

9. Equitably distributed public investment is needed for capital, operations, and infrastructure.

9.1 Expenditures in early childhood programs are investments that benefit individuals and society in the immediate and long term.

- Public spending on early childhood programs for children from birth to compulsory schooling ranges from a low of 0.2 per cent of GDP (Canada) to a high of 2 per cent (Denmark).

- Economic analyses of several early childhood interventions demonstrate that effective programs can repay the initial investment with savings to government and benefits to society down the road (e.g., Barnett & Mass, 2007; Lynch, 2007; Karoly, Kilburn, & Cannon, 2005; Kilburn & Karoly, 2007; Canadian Council on Learning, 2008; Schweinhart et al., 2005; Temple & Reynolds, 2007). Whether in affluent or in impoverished countries, those that invest in young children have more literate, numerate and healthy populations (Irwin et al., 2007). The majority of these analyses include longitudinal findings from a spectrum of American program types, including small-scale, model programs and larger-scale programs operating for several decades; expensive, intensive programs and ones that are less intensive; and centre-based programs and home-visiting ones (Kilburn & Karoly, 2007).

- Economist James Heckman (2008) and his colleagues have analyzed early intervention studies to examine the origins of inequality and policies to alleviate it. Heckman concludes that early development sets the foundation for academic and life skills. Early interventions benefit individuals, boost the productivity of the economy and can partially compensate for early adversity. Early skills support later skills and enhance the productivity of later investment in education. Heckman also concludes that while it is possible to remediate during middle childhood, adolescence or later, it becomes increasingly more difficult and costly.

- Academic achievement contributes to human potential and is a chief determinant of a society's prosperity. In the United States, the economic impact of the achievement of some groups of students compared to others is significant (Heckman, 2008; McKinsey & Company, 2009). While Canada's overall achievement rates are higher, there is a significant difference among groups of students that limit economic and social progress

(Martin & Florida, 2009). McMurtry and Curling (2008) note that effective early childhood programs prevent crime and violence (and their associated costs) through early identification of literacy challenges and behavioural problems.

- In general, early childhood program policies that are directed towards developmental or educational benefits for young children, as well as supporting parental labour force participation, have the greatest ratio of benefits to costs (Cleveland & Krashinsky, 2005). While the per child economic benefits of early childhood interventions are likely to be greater for programs that effectively serve targeted, disadvantaged children than for programs that serve lower-risk children, Canadian and American econometric studies illustrate the cost-benefits of universal early childhood programs (Cleveland & Krashinsky, 1998; Lynch, 2006). Krashinsky & Cleveland (1998) estimate a savings of $2 for every dollar spent in high quality child care programs in Canada. In the United States, Lynch (2007) estimates that investment in universal pre-Kindergarten would produce the same economic benefits.

- A comprehensive review of the evidence on the benefits and costs of early childhood programs concludes that the benefits to children rise with the level of quality (Cleveland & Krashinsky, 2005 Kilburn & Karoly, 2007). Children from low-income or disadvantaged families benefit, but when the quality of home and parental care is controlled, all children from all backgrounds benefit from good quality early childhood programs (NICHD, 2000). While the rate of return of investment in quality programs may be greater for disadvantaged and vulnerable children in the United States (Kilburn & Karoly, 2007), the economic argument for universal programs holds (Doherty, 2007; Cleveland & Krashinsky, 2005). It is likely that additional long-term health benefits that would accrue across the population have not been captured in cost-benefit analyses to date (Mustard, 2008). The delivery of specialized supports is more efficient from a universal program platform (Corter et al., 2006; Japel, 2008).

- Several Canadian studies reveal early childhood programs can generate community economic development with immediate economic returns, as opposed to the 10 to 20-year wait that human development requires (e.g., Prentice, 2007a, b, c). Reports from Manitoba underscored employment effects: there are more jobs in child care than in the entire Manitoba film industry, and about as many as in the better-known bio-technology and health research sector or the energy and environment sector, both of which are priority areas for the government. Every dollar of investment generates about $1.58 in economic activity. In addition to supporting the labour force participation of parents, every job in a child care centre creates or sustains 1.49 jobs.

- Other municipal reports have used economic arguments to recommend expanded services (Coffey & McCain, 2002; Mahon & Jenson, 2006; Vancouver Board of Trade, 1999). The Toronto Board of Trade (2001) named available child care as part of the social program mix that would stop the flight of capital from the city. Chambers of commerce have voiced their concerns that a lack of child care spaces is shrinking their employment base and leading to depopulation, particularly of rural communities.

9.2 Public funding for operational costs comes in the form of fee subsidies (demand side) and direct program funding (supply side).

- If early childhood programs are financed through the supply side, they can be directly provided through the public sector (e.g. public education) or purchased from private non-profit or for-profit providers. If purchased from private providers, the quality of services becomes more problematic and non-profit status is not an adequate indicator (Cleveland & Krashinsky, 2005).

- Early childhood resources are not evenly distributed among communities in Canada, with access a particular barrier in rural and remote areas and for urban Aboriginal and immigrant families (OECD, 2004). A study of child care subsidies in California found that the subsidy system which recognized a mixed delivery system of quasi-public, community non-profit and profit programs perpetuated inequities in children's readiness for school learning based on the type of care they received (Whitebook, Kipness, & Bellm, 2007). Expenditure data reveal an enormous variance between the most expensive and least expensive preschool provisions in the United States (Levin & Swartz, 2007) and in child care provision in Canada (Friendly et al., 2007).

9.3 The most effective mechanisms to meet goals of access and quality are based on supply side approaches.

- According to the OECD (2004), only the regular funding that state investment brings is able to guarantee access and quality on a fairly equitable basis for all groups. Supply-side options involving direct public funding to programs are found to support the viability of programs and offer government greater control over planning, quality levels, evaluation and data collection.

10. Measurement of children's achievement and program effectiveness, as well as monitoring of community impact and system performance.

Measurement and accountability approaches in elementary education and early childhood education are quite different. Child outcomes, particularly academic achievements, are central to school accountability frameworks. However, in early childhood programs, the emphasis is on measures of program quality (Bertrand & Corter, 2007).

10.1 The assessment of individual children in early childhood programs can be sensitive to developmental and cultural diversity, while ensuring optimal opportunities and recognition of potential difficulties.

- Continual observation and documentation allow educators to assess children's developmental progress and plan curriculum (Best Start Early Panel on Learning Expert, 2007; Bertrand & Corter, 2007; National Early Childhood Accountability Task Force, 2007). Effective assessment based on observation and documentation takes place within a coherent framework and systematic records (Siraj-Blatchford et al., 2007). In early childhood, using observation from several sources including observations and assessment of children's work, provides a more holistic and accurate assessment of early development and learning than other methodologies (Chilvers, 2002; Mort, 2009; National Research Council 2001). Children themselves can contribute to assessments through their own observations and documentations (Carr, 2001). The professional literature includes extensive description of observation and documentation methods in early childhood programs (for example, Carr, 2001). Relatively few studies in the existing academic literature report on these popular methodologies, but innovative research approaches are emerging (e.g., Bernhard, Winsler, & Bleiker, 2004; Carr, 2001; Carr, May, Podmore, Cubey, Hatherly, & Macartney, 2002). The interest in observation and documentation as assessment of children's learning and development grows in tandem with the growth of emergent curriculum approaches.

- Developmental monitoring tools are designed to identify children who may have developmental or learning problems (Meisels & Atkins-Burnett, 2006). They are typically brief, inexpensive to administer and based on an inventory of skills or developmental milestones that children typically acquire during their early years (National Early Childhood Accountability Task Force, 2007). The results are not conclusive but provide a starting point for conversations with families and indicate the need for further diagnostic assessment and evaluation. In Ontario, the Nipissing District Developmental Screen (NDDS) is used and recognized provincially as a general developmental assessment tool. The report of the Expert Panel on the 18-Month Well Baby Visit (2005) recommended NDDS as part of the primary health care developmental review and for use across early childhood programs (Williams, Biscaro, & Van Lankveld, 2006).

- Early learning standards are outcome standards that describe what children should know and be able to do (Kagan & Britto, 2005). These standards are used to inform curriculum and pedagogy. Early learning standards also include performance standards that describe how children can demonstrate that they have met the content standards (Epstein et al., 2004). The standards may be assessed either informally in everyday practice or in more formal ways, including standardized testing. They do not provide a coherent framework for early childhood programs (Scott-Little, Lesko, Martella, & Melburn, 2007; Fromberg, 2006). When standardized assessments or early learning outcomes become the basis for early childhood curriculum and pedagogy, educators may 'teach to the test' and often encourage a focus on measurable, isolated skills (Fromberg, 2006). Almost all states in the United States have developed early learning standards for pre-Kindergarten-age children, and an increasing number of states have developed infant-toddler early learning standards (Scott-Little, Lesko, Martella, & Milburn, 2007). Clear and appropriate expectations for learning and development across developmental domains is perceived as essential for optimal benefits for children and for program quality among American and United Kingdom early childhood researchers and policy-makers (National Early Childhood Accountability Task Force, 2007; Barnett, 2008; Siraj-Blatchford et al., 2007; Sylva et al., 2004). Children benefit when early learning standards encompass: physical well-being and motor development, social/emotional development and approaches to learning, language development, cognition, and general knowledge to measure children's progress in early childhood programs (Barnett, 2008; National Research Council, 2001; National Early Childhood Accountability Task Force, 2007; Frede, 1998; Kagan & Kauerz, 2006).

- Standardized direct assessments of young children's developmental skills are prone to serious error when given to children under age eight (Miller & Almon, 2009; Meisels, 2007). Such tests may be used to assess children's school readiness or early learning skills as early as four years of age (Ackerman, Barnett, Hawkinson, Brown, & McGonigle, 2009; Sloat, Beswick, & Willms, 2007; Kagan & Britto, 2005). The results of a single child assessment administered at this age do not provide reliable information.

10.2 A province-wide approach to program evaluation allows for collaboration among communities, quality assurance and accountability.

- A recent review of the literature about quality early childhood environments (Friendly, Doherty & Beach, 2006) reports an international consensus on nine critical elements of quality programs: safety; good hygiene; good nutrition; appropriate opportunities for rest; promotion of equality of opportunity regardless of gender or other differences; opportunities for play and for development of motor, social, language and cognitive skills; positive interactions with adults; encouragement and facilitation of emotional growth; and an environment and practices that support positive interactions among children. These

elements are supported by research studies that have examined what kinds of programs best support children's optimal development.

- In Ontario, many different, mostly unvalidated tools are in use on an ad hoc basis, typically through a participatory, self-evaluation approach (Bertrand & Corter, 2007). Early childhood programs can check their practices against program standards that reflect diversity, equity and inclusion (Irwin, 2005). Toronto First Duty's Indicators of Change tool allows early learning and child care programs to evaluate progress towards integrated service delivery (Corter et al., 2006).

- The Early Childhood Environmental Rating Scale – Revised (ECERS-R) is a reliable and valid measure of program quality in a wide range of studies conducted in a variety of settings (Bertrand & Corter, 2007). Studies that directly measure the relationship of child care quality to outcomes of child development most frequently use the ECERS-R (Harms, Clifford, & Cryer, 1998) and Infant-Toddler Environmental Rating Scale (Harms, Cryer, & Clifford, 2003).

- The Caregiver Interaction Scale uses 23 items scored on a four point scale as three subscales of caregiver behaviour (sensitivity, harshness and detachment). It is often used in child care quality studies to measure the emotional and interpersonal climate of early childhood programs (Goelman et al., 2000; Doherty et al., 2000).

- The Classroom Assessment Scoring System (CLASS) was developed to measure the quality of instruction in pre-Kindergarten to Grade 5 classrooms (Pianta, La Paro, & Harme, 2008). It includes 10 dimensions organized within three broad categories - emotional support, organizational support and instructional support. The tool focuses on what teachers do to stimulate reasoning, problem-solving and depth of thinking about materials or experiences. The CLASS assessment is used in early childhood programs (including child care centres, pre-Kindergarten and Kindergarten).

- Accreditation is a process by which a recognized independent body establishes standards for services and evaluates programs based on those standards (Doherty, 2000). Accreditation or operating criteria are often based on indicators or benchmarks of what is considered effective practice (based on research findings, professional judgment and community values). To date, large-scale accreditation processes have not been linked with improvements in quality, independent of other factors (e.g., salaries, ratios, leadership) (Whitebook, Sakai, & Howes, 1997; OECD, 2006; Mustard, 2008). Most accreditation processes are based on self-evaluation strategies.

10.3 The impact of early childhood programs at the community or population level provides information about how children are doing within their environmental context.

- The importance of communities, particularly in the role of children's early development, is being increasingly recognized (Love, Abner, & Brooks-Gunn, 1994). Community is defined broadly to include the immediate environment of the child outside of their home (i.e., in residential terms the neighborhood, in educational terms the local school district, and in government terms the lowest level of local government) (Love et al., 1994). Communities have the potential to influence children's early development by providing infrastructure, services, learning opportunities, and supports for families with young children, as well as directly for children. Measures at the aggregate/community level are important to gain an understanding of how communities differ, which communities are doing poorly, and which may need additional 'help' (Kershaw et al., 2006). A community-level assessment of child development and early learning measures what a population of children, residing in a certain community know and are able to do. This is for the purpose of monitoring changes over time, informing policy, and recommending improvements (Murphy & Burns, 2002).

- National surveys, surveillance systems and census data provide data sets that allow researchers and policy makers to monitor children's development at a population level (Lloyd, 2008). Longitudinal surveys follow a representative sample of children over time.

- Birth outcomes, Early Development Instrument (EDI) and school achievement tests (e.g., Ontario's EQAO tests) are measures of individual children that can be aggregated to provide a community or population profile (Lloyd, 2008; McCain et al., 2007). While the measures are individual, they are too crude to provide much useful information about an individual child's development. They do provide a community and population measure that can monitor the relationship of family and community factors on child development, contribute to program and system planning and mobilize community resource allocation.

- Overall, disadvantaged children and youths living in disadvantaged communities are associated with worse outcomes than their more affluent peers. However poor outcomes are present among a percentage of children and youth in all socioeconomic groups. Measures of early development show that the greatest number of children with developmental difficulties live in middle-income families with two parents (Kershaw et al., 2006; Barnett, 2008). Wide variations among EDI and school achievement measures among children living in different regions underscores that ethnicity, race and poverty are not destiny. (McKinsey and Company, 2009; Kershaw et al., 2006).

- In Ontario, communities are using EDI results within the context of community early child development reporting, but there is a vacuum in linking and strengthening these efforts or

for using them to construct a province-wide approach (Garnder & Vine, 2007; Best Start Expert Panel on Early Learning, 2007). Local data analysis coordinators (DACs) in Ontario work in communities across the province. Confusion over their role (Kothari et al., 2008) has challenged their ability to report on local administrative and child outcome data.

- For the fifth Toronto Report Card on Children (City of Toronto, 2005), the Toronto District School Board matched EDI data with Statistics Canada's census data to document the level, extent and types of vulnerability among children throughout the city. The results obtained are similar to those found in Vancouver. There is a social gradient of vulnerability in which the children's EDI scores track with the average income of families with children in the community. Approximately 25 per cent of four-year-old children in schools in the poorer and poorest economic districts of Toronto scored in the lowest 10th percentile in two or more domains of the EDI (City of Toronto, 2005).

- Data sets can be linked together to monitor population level developmental trajectories over time. Consistent measures of early childhood, such as the EDI, can be linked to other measurements of health, education and behaviour outcomes. (McCain et al., 2007). It is possible to link together databases to integrate population-wide, person-specific data at the national, provincial and community levels. By linking anonymous individual outcome data with other census and program administrative databases scientists, policy makers and communities can better understand the relationships among developmental outcomes, demographic characteristics, cultural factors and socio-economic circumstances (Lloyd, 2008).

- In Manitoba, comprehensive databases allow the comparison of population data with student enrolment, high school course marks and standard test scores for children in grades 3 and 12. In both instances, the standard school tests show a small gap exists between children living in low socioeconomic families compared to those in more affluent families. When the school test data is linked to population data from health databases and includes all of the children who should have written the test, the gap becomes much larger (Brownell, Roos, Fransoo et al., 2006).

10.4 Monitoring the development and implementation of early childhood systems is another aspect of accountability

- The OECD conducted the Thematic Review of Early Childhood Education and Care Policy in twenty jurisdictions between 1998 and 2006 (OECD, 2001, 2006). The purpose of the review was to strengthen the foundations of lifelong learning. The OECD review identifies eight specific policy elements associated with effective early childhood programs:

- A systemic and integrated approach to early childhood education and care policy.
- A strong and equal partnership with the education system.
- A universal approach to access, with particular attention to children in need of special support.
- Substantial public investment in services and infrastructure.
- A participatory approach to quality improvement and assurance.
- Appropriate training and working conditions for staff in all forms of provision.
- Systematic attention to data collection and monitoring.
- A stable framework and long-term agenda for research and evaluation.

- UNICEF's Innocenti Research Centre (United Nations Children's Fund, 2008) report card on early childhood programs is based on 10 benchmarks that address quality and access issues. It reported that Canada ranks last with Ireland among 25 developed countries.

- In the United States, a concerted effort to expand pre-Kindergarten programs for three- and four-year-olds (Kirp, 2007) has resulted in a rapid increase in pre-Kindergarten programs in most states. The National Institute for Early Education Research has developed a National Quality Standards Checklist for state pre-Kindergarten programs. It includes benchmarks for quality, access and resources (Barnett et al., 2009).

10.5 A stable data collection framework and long-term agenda for research and evaluation are needed to support an early childhood system.

- Administrative data, including utilization and financial reports, unmet service needs and characteristics of the early childhood workforce, can be used alone or in combination with other program evaluation, assessment and monitoring data (Anderson & Findley, 2007; Friendly, Doherty & Beach, 2006; Miller & Almon, 2009). This data can be collected as part of the service delivery of early childhood programs and can be used to support planning and resource allocation and to ensure accountability.

- Without data collection and research, governments cannot plan, monitor or assess programs (Best Start Expert Panel on Quality & Human Resources, 2007; Cleveland, Colley, Friendly, Lero, & Shillington, 2003). These mechanisms also let Canadians know if their investments in children are making a difference and tell communities what has gone wrong and what is going right for young children in their neighbourhoods.

11. A coherent implementation strategy is essential to building an early childhood system.

11.1 Recent system reforms in the education sector in the United Kingdom and in Ontario have generated understandings about an implementation agenda to reform systems.

- Political leadership, as well as commitment to vision and the process of implementation of key priorities, are essential to system change (Barber, 2007; Fullan, 2008; Thompson, 2007; Whelan, 2009). The implementation of system change requires more focus on the doing rather than the planning. Taking stock of progress on key priorities on a regular basis is essential. Assessments and program reviews raise expectations for performance across the system, provide information to educators, schools and the system as a whole on strengths and weaknesses, and form the basis for a range of other policies which lead to program improvement. However, assessments and reviews are damaging when they are too narrowly focused or rely too heavily on specific targets (Fullan & Barber, 2009). Continual feedback informs the process and keeps it moving forward (Fullan, 2008).

- A new professionalism of the entire teaching workforce is essential (Barber, 2007). Three strategies are important to establishing effective teachers: recruiting the right people to become teachers; developing them as effective instructors; and ensuring that they are able to deliver the best possible instruction for every child, including intervening early to address gaps (Barber, 2007; Fullan, 2008). Teaching improves when teachers are able to learn continuously. Professional development is not an end goal, but an input into continuous learning and precision in teaching. Improvements in teaching are accomplished when the school culture supports the day-to-day learning of teachers (Fullan, 2008).

11.2 The successful implementation of an early childhood system must set out an agenda for transformation that moves from a series of ad hoc, incremental initiatives to a coherent, dynamic set of aligned strategies.

- System-building in early childhood requires merging well-defined programs within the education system with a scattering of public and private services with multiple, overlapping purposes, regulatory requirements and funding (Halfon, Russ, Oberklaid, Bertrand & Eisenstadt, 2009; McCain et al., 2007; OECD, 2006). Jurisdictions, such as France, Sweden, Chile, Brazil, and the United Kingdom that have created or are creating an early childhood system, have moved beyond incremental changes to an integrated delivery that combines existing programs into a single program delivery platform, often as part of the education system (Bennett, 2008).

- Over the past decade, attempts to build universal, integrated early childhood systems by merging public early education programs and private (non-profit and commercial delivery) underscore the challenges of successful implementation and the need for top-down and bottom-up strategies. Since 1997, policies in Britain have aimed to create an integrated

early childhood system under a single government department and eliminate the split between 'education' and 'care' services (Sylva et al., 2009). The initial implementation of Sure Start in 1999 established 500 local programs by 2004 to deliver integrated family support, early learning and play experiences for children under the age of four years (Halfon et al., 2009). Local communities were able to define their own program priorities and operated without a clear central infrastructure or service objectives. Initial evaluations were mixed (Belsky, 2007). In 2003 the central government stepped up its consolidation of policies and infrastructure making joint working a priority across health, education and social services and local bodies were instructed to create Children's Trusts for joined up services by 2008 (Siraj-Blatchford & Siraj-Blatchford, 2009). The Sure Start initiatives were expanded into Children's Centres (some within schools) to provide integrated services to preschool children and their families, including preschool care and education, and a variety of parenting supports in a 'one-stop-shop' approach. All of the early childhood programs were brought together in one central government department. In practice the Children's Centres and other initiatives are being created in very different ways (including contracting out of specific program delivery to private operators) and need greater clarity from the central government to support sustainable integrated program delivery that benefits children and families (Siraj-Blatchford & Siraj-Blatchford, 2009).

- Prominent principles and values should guide the implementation of system change. Effective early childhood systems have well-defined principles and purposes that are well understood by educators, families and communities and guide decision-making (OECD, 2006; Victorian Curriculum and Assessment Authority, 2008). They make educational effectiveness a priority over serving as many children as possible during the initial implementation phase (Ackerman et al., 2009; OECD, 2006).

- Sustainable integrated program delivery requires shared local and state or provincial governance (Bennett, 2008; Corter et al., 2008; Siraj-Blatchford & Siraj-Blatchford, 2009). Networks that attempt to coordinate multiple programs while keeping multiple lines of accountability, regulatory requirements and funding in place rely on relationships and may be successful in the short term. Longer term sustainability requires system change and consolidation into a common governance structure (OECD, 2006).

- The rapid expansion of pre-Kindergarten in several states underscores the need for policy infrastructure, including a planning process that encourages collaboration and possible integration among different auspices (Ackerman et al., 2009; Barnett et al., 2009). A continuous cycle of planning, implementing and reviewing is necessary to ensure that new state-wide initiatives are meeting their intended goals. Use of common assessments that provide valid measures of program implementation are a necessary part of the planning, implementation and reviewing cycle.

11.3 Integrated delivery of early childhood programs requires consolidated decision-making at the local and program level.

- The support of leaders from the top political level is important to maintain momentum in the evolution of consolidated early childhood systems in the United Kingdom, Western Europe and Quebec (Siraj-Blatchford & Siraj-Blatchford, 2009; OECD, 2006; Tougas, 2004).

- Local inter-sectoral coalitions that bring together local authorities and stakeholders from existing programs, can contribute to developing practices of integration that are essential to implementing a new policy framework (Ackerman et al., 2009; Corter et al., 2006; Mort, 2009). However, unless the local coalition has designated authority and delegated responsibilities, participation relies on relationships. Sustainability requires a consolidated policy framework and clear accountabilities (Centre for Community Child Health, 2008c); Corter et al., 2008).

- At the program delivery level, demonstration integrated centres can be useful models of what is possible as part of the transition process from fragmented delivery to an integrated early childhood system (Centre for Community Child Health, 2008c; Corter et al., 2008; Siraj-Blatchford & Siraj-Blatchford, 2009). An integrated governance model (with a pooled budget, shared mandate, clear focus and joint decision-making), strong leadership, common program philosophy and practices, parent engagement and quality early learning environments for children are key design principles for early leader sites (Centre for Community Child Health, 2008c; Corter et al., 2008; Siraj-Blatchford & Siraj-Blatchford, 2009). Administrative mechanisms such as partnership agreements and common registration and consent forms (Corter et al., 2006) or master contracting (Lepler, Uyeda, & Halfon, 2006) address many of the issues in trying to demonstrate integrated delivery while existing funding and accountability remain in separate streams.

11.4 The practices of integration in early childhood programs must focus on benefits to children and their families.

- Implementation must ensure high quality, while expanding access to greater numbers of children and families (Barnett, Brown, & Shore, 2004; Corter et al., 2008; Japel, 2008; Shonkoff & Phillips, 2000). Increasing access requires building more capacity (Ackerman et al., 2009). Achieving inclusiveness and equality of access should be embedded in explicit policies and practices (Bertram et al., 2003).

- Programming needs must match the needs of families and local communities and be easily accessible (Corter et al., 2008; Peters et al., 2004). To ensure inclusion of all families, targeted and clinical services must be incorporated into the universal platform to address identified individual needs of children and families (Doherty, 2007; McCain et al., 2007; Scott, O'Connor & Futh, 2006).

- Professional development and education programs are needed to prepare educators and others to work effectively in integrated settings (Corter et al., 2006; McCain et al., 2007; Siraj-Blatchford & Siraj-Blatchford, 2009). Existing educators need joint professional development opportunities, as well as a willingness to develop a shared understanding, language, and expansion of their skill set for successful integrated, flexible practice (Ackerman, 2005; Bertram et al., 2003).The supply of qualified educators for an early childhood system that includes expanded programming for more children and their families depends on an reasonable level of salaries and benefits (Ackerman et al., 2009; Bertram et al., 2003; Needham, 2007). The current shortage of positions that can attract qualified ECEs is greater than the numbers of individuals qualified for positions.

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