
TEN REASONS TO EXPAND PUBLIC KINDERGARTEN

An increasing number of jurisdictions are following the research and committing to a two-year kindergarten experience for four- and five-year-old children in a play-based curriculum. While kindergarten is available to all five-year-olds across Canada, most provinces and territories offer in-school programming for at least some children prior to kindergarten. Universal preschool for four-year-olds is offered in the Northwest Territories (NWT), Ontario (ON), and Nova Scotia (NS) and is expanding in Quebec (QC).

Prince Edward Island and Newfoundland are committed to four-year-old preschool. In the model recommended by Newfoundland's Taskforce on Improving Educational Outcomes (Collins, et., 2017) schools would provide universal access to all four-year-olds. Classes would be led by a kindergarten teacher, co-teaching with an early child educator, who stays with the children for two years really getting to know them and their families.¹

Two-years of kindergarten delivered within the school system leverages existing investments within public education and ameliorates several issues facing families, communities and government:

- High rates of illiteracy (including reading, writing and numeracy) that are a drag on the economic futures
- Growing special education demands fueled by an increase in academic and language gaps and behavior challenges that are easier to address when interventions begin early
- Increasing child care costs to families that reduce parental, particularly the labor force participation of mothers

Kindergarten delivers its best outcomes when:

- Enough children attend to impact population health outcomes
- Children attend for two or more years prior to compulsory schooling
- Children attend for a minimum of 20 hours per week
- Programs are of high quality

This paper highlights 10 areas of research documenting the rationale for universal pre-k.

¹ ON uses a teaching team of an early childhood educator (ECE) and a Kindergarten teacher for classes of approximately 26 children, except for smaller classes where two educators are not warranted. NWT funds an ECE or a Kindergarten teacher for every 12 children. In smaller communities blended classes of JK to Grade 1, are common. In NS, two ECEs teach classes of 20 children. In QC teachers with early childhood specializations lead classes of no more than 17 children.

1. KINDERGARTEN IS NO MORE EXPENSIVE THAN LICENSED CHILD CARE

If the goal is to narrow achievement gaps between advantaged and disadvantaged learners, there are no cost savings in turning to private delivery. The costs of fully subsidizing a child care space can be greater than the cost of kindergarten. Space in schools can often be repurposed for less cost than a new child care build. Supports for junior kindergarten (administration, professional development, etc.) can be integrated into the infrastructure of schools rather than creating a new regulatory system of supports and accountability in the private sector. In small communities four-year-old children can be integrated into existing classrooms.

As an example, QC subsidizes child care at an average of \$12,800/space annually in addition to charging a parent fee. It funds full day kindergarten at \$10,200 per child annually. No parent fees are leveled for the school part of the day. Parents requiring extended hours pay \$10 to \$20 a day, depending on their income, for before and after school care provided by school boards. QC parents appreciate their school's kindergarten program; where available, 98% of children participate. When kindergarten is organized to benefit children's development and parents' work schedules the public costs are offset by both the increased tax revenue from working parents and the reduced draw on income-tested social programs.

2. A STRONGER START IN GRADE 1 THAT CARRIES FORWARD

Two years of a full day of learning before Grade 1 is a strong foundation for future learning. Reading, writing and math skills improve. Language skills are strengthened and core competencies such as problem-solving, creative thinking, social competence, emotional maturity and behavioral regulation.

In ON, research points to improved academic and social outcomes for children attending full-day kindergarten compared to children who attended half-day (Pelletier, 2012/2017). While full-day kindergarten only became universally available in ON in 2014, the province has already updated its elementary curriculum to accommodate the advanced skills and interests of the children entering Grade 1.

The expansion of preschool programs in the United States has been accompanied by a plethora of research studies. Consistently the findings point to positive academic and social-emotional child outcomes IF provision is of high quality – i.e. qualified educators and intentional pedagogy that builds on play-based learning (Barnett, 2011; Wieland & Yoshikawa, 2013).

Extensive longitudinal research in UK points to significant academic and social-emotional benefits for every year of preschool prior to school entry that carry forward into high school, including increased mathematical skills in children independent of their family's socio-economic status (SES) (Sylva, et al., 2013).

3. REACHING VULNERABLE CHILDREN

Early Development Instrument (EDI) results across Canada indicate that a significant proportion of children (at least 1 in 4) are vulnerable when they enter Grade 1 – that is, they have difficulties in one or more social, emotional, cognitive, physical or language domain (Guhn, et al., 2011) which may compromise their ongoing academic success.

Children with social-emotional and learning vulnerabilities are spread across socio-economic groups but are found in higher proportions in low SES families and neighborhoods. Vulnerable children are under-represented in early learning and child care programs where the essential criteria for access is primarily parental labor force participation.

The QC government, which has invested in expanding community and for-profit child care over the past 20 years, is now instituting four-year-old kindergarten within its schools because the most vulnerable children are least likely to attend child care. A universal program within schools stands a better chance of accommodating all children, particularly the most vulnerable.

4. REDUCING SPECIAL EDUCATION ENROLLMENT

Approximately 15% of the school population relies on special education supports with 60% of that number lagging in literacy/numeracy, language and/or behavioral regulation. The international research identifies the advantages of a two-year early learning experience in boosting literacy/numeracy, language, and behavioral regulation, especially for those from low SES families (Philpott, et al., 2019).

In the U.S., a review of 22 longitudinal studies found two years of kindergarten attendance resulted in an 8% reduction in special education interventions while boosting graduation by over 10% (McCoy et al., 2017). A review in the European Union reached similar findings, stating that those boosts did not fade across the children's school experience, especially when programs were good quality (Ulferts, et al., 2019). A study in the UK concluded that 51% of children without kindergarten were cognitively at risk at age six compared to 21% of those who attended preschool for at least two years. The reduction held across domains: reading - 44% versus 23%, math - 37% versus 16%; social struggles 51% versus 21% (Sammons et al, 2003). In ON children without two years of full-day kindergarten were three times more likely to be more than one standard deviation from the mean in self-regulation, 1.5 times more likely to lag in language and twice as likely to lag in reading (Pelletier & Fesseha, 2019).

All of these studies mention the importance of ensuring high quality early learning to maximize reduction in special education. In the UK, a recent study compared the impact of high quality versus low quality early education.

Melhuish, et al., (2019)

concluded that those with low quality preschool had a 36% reduction in cognitive risk by age five versus those with high quality who had a 45% reduction. By age 16 the impact had widened to 55% reduction for those with high quality versus 40% reduction for those with a lower quality experience.

IMPACT OF ECE PARTICIPATION AT SECONDARY SCHOOL

| | No ECE | With ECE | Results |
|------------------------|--------|----------|---------------------------------------|
| Special Education | 28.3% | 20.3% | Special education placement down 8.1% |
| Grade Retention | 30.6% | 22.7% | Grade repetition down 8.3% |
| High School Graduation | 62.6% | 74.0% | High school graduation rates up 11.4% |

Source: McCoy, Yoshikawa, Airol-Guest et al, 2017. Akbari & McCuaig, in press.

5. MORE TIME WITH FRIENDS, MORE TIME TO PLAY

Children want and need other children to complement their development. During the full school day, children benefit from being able to socialize and play with other children on a regular basis. This allows more time for both formal and informal instruction while also accommodating child-directed play. Children in full-day kindergarten programs report higher levels of enjoyment in their day and with their friends (Pelletier, 2012; Page & Tayler, 2016).

Children who are English or French language learners benefit from regular interactions with peers that accelerates the acquisition of a second language while consolidating their home language (Hertzman, 2011).

6. A SEAMLESS DAY AND EXPERIENCE

A two-year experience, especially those with an extended day to accommodate parents' work schedules, allow children to remain in familiar surroundings with educators and friends, rather than moving between different programs and locations. Extending the day beyond the school hours within the school facility or in a nearby location is often possible. The elimination of transitions not only benefit children, they reduce daily stress, and cost, for their parents (Janmohamed, et al., 2014).

It is estimated that ON families are saving over \$6000 per year in child care fees since that province expanded its half-day Junior and Senior Kindergarten program to full-day.

7. PLAY-BASED LEARNING CURRICULUM

Young children benefit from a play-based learning curriculum that capitalizes on the power of play to engage children in intentional learning opportunities. The Nordic countries that typically report strong academic achievement do not begin formal instruction in reading and math until age seven. But they do offer full-day programs to most younger children that emphasize a play-based learning approach and they do lead the world in literacy, numeracy and science outcomes in later school years (McCain, Mustard & McCuaig, 2011).

Rather than ‘schoolification’ or the push-down of academic instruction onto younger children, the concept of play-based learning in school-based four-year-old kindergarten is pushing up into the primary grades (Akbari & McCuaig, 2014). Play-based learning is the pedagogy that builds strong STEM skills (McClure, et al., 2017)

When a two-year-old kindergarten is delivered as a continuation of the school system, it is possible to establish a continuum of learning that benefits children’s academic and social skill acquisition (US Department of Education, 2016).

8. EDUCATORS ARE CRITICAL TO EFFECTIVE PROGRAMS

Effective pedagogy for young children relies on educators who have foundational knowledge about early development and learning (LaRue & Kelly, 2015). They continually make decisions about the curriculum that respond to children’s knowledge, skills and learning dispositions. The continuum of play-based learning defines the role of educators in implementing play-based learning on a continuum from child-directed to educator-guided learning experiences (Pyle & Danniels, 2016).

Qualified early childhood educators are grounded in an understanding of early human development and play-based learning. Educators with degrees, including Bachelors of Education, in classrooms with younger children do not provide higher quality learning environments unless their degrees include a specific focus on early development and pedagogy (Pascal, 2009).

Early childhood educators, particularly those with diploma level qualifications, benefit from ongoing, focused professional learning opportunities (LaRue & Kelly, 2015).

9. FOUR-YEAR-OLD KINDERGARTEN IS GOOD FOR SCHOOLS

Canadian public education enjoys public confidence. Canada has the highest percentage enrolment in publicly-funded schools of all the Anglo-American countries. By adapting to the changing needs of families, schools can maintain public confidence (Beach & Bertrand, 2009).

Combining four- and five-year-olds in a common curriculum environment makes pedagogical sense. A common curriculum framework, instructional materials, documentation processes and instructional practices are used. The teacher really gets to know these children and their families. Forging strong

relationships at the beginning of the school continuum has lasting effects, especially for marginalized families. Younger children and families transform schools into community learning centers rather than a place that separates children from their families and the wider community.

Junior kindergarten can make small schools more viable, particularly in rural and remote areas, where the school may be the only community resource. The 2017 task force report, *Now is the Time* (Collins, et al., 2017), identified 62 schools in NL with fewer than 15, four- and five-year-old children. 43 schools had fewer than five, five-year-olds. These are communities where private centers are not possible and there are no services for young children. The cost of a combined two-year kindergarten is negligible in those areas while the impact is significant. Schools are in every neighborhood and schools often have suitable space and a supportive infrastructure that are not readily available elsewhere in the community. Investing in school infrastructure provides opportunities to create efficiencies, reduce overlaps and gaps, expand service, improve quality and accountability.

10. TWO-YEAR KINDERGARTEN CAN BENEFIT THE EARLY CHILDHOOD SECTOR

Two-years of kindergarten are an opportunity to re-engineer the delivery of early childhood and family programs. If four- and five-year-old children are in full day programs, child care and preschool programs can expand to offer more services to younger children and families (McCain, Mustard & McCuaig, 2011). It makes the early years a more viable career sector, attracting more professionals and allowing them a more stable career path. In other jurisdictions two years of kindergarten resulted in early child educators returning to the sector and those already employed staying longer. A more stable early years workforce benefits all ECEs, schools, families and children.

PREPARED BY:

Jane Bertrand, Program Director for the Margaret and Wallace McCain Family Foundation Inc.

Kerry McCuaig, Fellow in Early Childhood Policy at the Atkinson Centre/OISE, University of Toronto.

David Philpott, Professor at Memorial University and member of the NL Premier's Task Force on Improving Educational Outcomes.

REFERENCES

Akbari, E. & McCuaig, K. (2014). *Early Childhood Education Report 2014*. Toronto, ON: Atkinson Centre for Society and Child Development, OISE, University of Toronto.

Barnett, S. (2011). Effectiveness of early educational intervention. *Science*, 333. 975-978. Retrieved from: <https://www.researchconnections.org/childcare/resources/21755?topic=parenting-education&type=Other&paging.startRow=1&author=Barnett,+W.+Steven&publicationYear=2011>

- Beach, J. & Bertrand, J. (2009). Early childhood programs and the education system. *Pediatric Child Health*. 2009 December; 14(10): 666-668.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2807809/>
- Collins, A., Philpott, D.F., Fushell, M., & Wakeham, M. (2017). *Now Is The Time: Report of the Premier's Task Force on Improving Educational Outcomes*. Government of NL.
- Hertzman, C. (2011) British Columbia EDI Results. Personal communication.
- Guhn, M., Zumbo, B. D., Janus, M., & Hertzman, C. (Eds.) (2011). Special issue: Validation theory and research for a population-level measure of children's development, wellbeing, and school readiness. *Social Indicators Research*.
- Janmohamed, Z., McCuaig, K., Akbari, E., Gananathan, R. & Jenkins, J. (2014). *Schools at the Centre: Findings from Case Studies Exploring Seamless Early Learning in Ontario*. Toronto, ON: Atkinson Centre for Society and Child Development, OISE/University of Toronto.
- LaRue, A. & Kelly, B. Editors (2015). Transforming the workforce for children birth through age 8 Committee on the Science of Children Birth to Age 8: Deepening and Broadening the Foundation for Success; Board on Children, Youth, and Families; Institute of Medicine; National Research Council.
- McCain, M., Mustard, F. & McCuaig, K. (2011). *Early Years Study 3*. Toronto, ON: Margaret and Wallace McCain Family Foundation Inc.
- McClure, E. R., Guernsey, L., Clements, D. H., Bales, S. N., Nichols, J., Kendall-Taylor, N., & Levine, M. H. (2017). *STEM Starts Early: Grounding Science, Technology, Engineering, and Math Education in Early Childhood*. New York: The Joan Ganz Cooney Center at Sesame Workshop.
- McCoy, D., Yoshikawa, H., Ziol-Guest, K., Duncan, G., Schindler, H., Magnuson, K., Yang, R., Koepp, A., & Shonkoff, J. (2017). Impacts of early childhood education on medium- and long-term educational outcomes. *Educational Researcher*, 46(8), 474-487.
- Melhuish, E., Barnes, J., Gardiner, J., Siraj, I. Sammons, P., Sylva, L., & Taggart, B., (2019). A study on the long-term influence of early childhood education and care on the risk for developing special education needs. *Exceptionality Education International* 29(3). Retrieved at:
<https://ir.lib.uwo.ca/eei/vol29/iss3/>
- Pascal, C. (2009). *Our Best Future in Mind: An Annotated and Updated Summary of the Evidence*. Toronto, ON: Government of Ontario. Retrieved from:
<http://www.cpco.on.ca/ResourceLibrary/EarlyLearning/EvidenceSummary.pdf>

- Pelletier, J & Fesseha, E. (2019). The impact of full-day kindergarten on learning outcomes and self-regulation among kindergarten children at risk for placement in special education. *Exceptionality Education International* 29(3). Retrieved from: <https://ir.lib.uwo.ca/eei/vol29/iss3/>
- Pelletier, J. (2017). Full-Day kindergarten research in Peel (Part1: Results JK – Grade 2). Toronto, ON: Eric Jackman Institute of Child Study, OISE.
- Pelletier, J. (2012). Integrated service delivery and child social experience in Peel. Toronto, ON. Lessons for transition to early childhood program delivery, October 22-23, 2012, OISE. Retrieved from: http://www.oise.utoronto.ca/atkinson/UserFiles/File/Events/2012-10-22%20-%20Learning%20to%20Care/LTC_Pelletier.pdf
- Philpott, D.F., Penney, S.C., Maich, K., Young, G., & Butler, E. (2019). *The Preemptive Nature of Quality Early Child Education on Special Education Needs in Children*. Memorial University of NL: St. John's, NL. Retrieved from: <https://research.library.mun.ca/13571/>
- Pyle, A. & Danniels, E. (2017). A Continuum of Play-Based Learning: The Role of the Teacher in Play-Based Pedagogy and the Fear of Hijacking Play, *Early Education and Development*, 28(3), 274-289, DOI:10.1080/10409289.2016.1220771
- Sammons, P., Taggart, B., Smees, R., Sylva, K., Melhuish, E., Siraj-Blatchford, I., & Elliot, K. (2003). *The Early Years Transitions & Special Educational Needs (EYTSEN) Project*. Institute of Education, University of London. Retrieved from: <http://dera.ioe.ac.uk/18204/1/RR431.pdf>
- Sylva, K., Melhuish, T., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2010). *Early Childhood Matters*, Routledge, London, UK.
- Sylva, K., Melhuish, E.C., Sammons, P., Siraj, I. & Taggart, B. with Smees, R., Toth, K. & Welcomme, W. (2014). Effective Pre-school, Primary and Secondary Education 3-16 Project (EPPSE 3-16). Students' Educational and Developmental Outcomes at Age 16. Department for Education Research Report RR354.
- Ulferts, H., Wolf, K.M., & Anders, Y. (2109). Impact of process quality in early childhood education and care on academic outcomes: Longitudinal meta-analysis. *Child Development*, 90(5). 1474-1489.
- U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service (2016). *Case Studies of Schools Implementing Early Elementary Strategies: Preschool Through Third Grade Alignment and Differentiated Instruction* Washington, DC.
- Weiland, C & Yoshikawa, H., (2013). Impacts of a prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills. *Child Development* 84(6): 2112–30.

Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M.R., Espinosa, L.M., Gormley, W.T., Ludwig, J., Magnuson, K., Phillips, D., & Zaslow, M. (2013). Investing in our future. The evidence base on preschool education. Ann Arbor, Michigan: SRDC & New York: Foundation for Child Development. Retrieved from: <http://goo.gl/2gxwtS>