TORONTO FIRST DUTY

Phase 3 Report

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OCTOBER 2012

Document Citation:

Corter, C., Janmohamed, Z., & Pelletier, J. (Eds.). (2012). Toronto First Duty Phase 3 Report. Toronto, ON: Atkinson Centre for Society and Child Development, OISE/University of Toronto.

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ACKNOWLEDGEMENTS

The Toronto First Duty Research Team prepared the Toronto First Duty Phase 3 Research Report covering activities between 2009 and 2012. Susan Anderson, Heather Finch, Cate Gulyas, Shauna Kochen, Tania Lim, Bonnie Mok, Nathalie Rothschild, Alexandra Sorin and Erica Webb assisted with data collection.

The Atkinson Charitable Foundation provided ongoing funding support for the TFD research. TFD3 was also supported by a Social Sciences and Humanities Research Council of Canada grant (410092814). The City of Toronto Children's Services Division and the Toronto District School Board provided generous assistance in data gathering; special thanks are due to Lorraine McLeod and Maria Yau. Christine Davidson and the Dr. Eric Jackman Institute of Child Study's Laidlaw Centre provided ongoing administrative support to the Research Team and Saba Mir worked as Project Manager during Phase 3. Administrative support and staffing for the Research Team were also provided by the Atkinson Centre for Society and Child Development, Department of Applied Psychology and Human Development, at the Ontario Institute for Studies in Education, University of Toronto. The Atkinson Charitable Foundation and the Margaret and Wallace McCain Foundation have supported ongoing knowledge mobilization of TFD research for practice and policy. The City of Toronto has provided the Toronto First Duty web site for dissemination of findings.

Special thanks are due to all the research participants, including the children, families and professionals who contributed their time, reports and ideas. The staff members of the Bruce WoodGreen Early Learning Centre deserve particular recognition for their dedication to the Toronto First Duty project, as well as for their contributions to the research. Lori Gray, Jonathan Root and Elaine Levy led the outstanding BWELC team.

The opinions and interpretations in this paper are those of the TFD3 Research Team and do not necessarily reflect those of the sponsors.

FOREWORD

Kerry McCuaig[1]

This third and final report on Toronto First Duty (TFD) is the story of how scientific evidence was turned into community action and ultimately public policy. It began with a simple but compelling assumption: it is only through public policy that permanent and sustainable change takes place. An incentive fund from the Atkinson Charitable Foundation brought together thinkers from local government and school boards, community agencies and public health. Together with a robust research and communications team they went out to change the way early years services were perceived. They lassoed the dozens of disparate programs onto a single platform, anchored to the neighbourhood school. Players left their egos behind to create a single entry for children and families into a world of support and nurturing, beginning with pre- and post-natal care, right through to primary school.

TFD laid its roots deep in Ontario and spread beyond these borders. Over the years, policy makers from every jurisdiction in Canada have witnessed how the future for young children can be. It became the template for the unique educator teaching team now legislated for full day kindergarten in Ontario; it informed the rich learn through play curriculum now adopted in most early childhood settings. It documented the do's and don'ts in re-conceptualizing schools as child and family centres, rather than 'no parents allowed' zones.

Others have adapted TFD's framework and used its tools to launch their own early years uprisings. In Atlantic Canada TFD-like models have paved the way to extensive legislative and delivery changes. TFD is also popular with Australian officials working to reconfigure their children's services.

TFD is the little program that could. It began over a decade ago with an ambition to showcase the directives from the first Early Years Study authored by the late Dr. Fraser Mustard and Margaret McCain. Mustard and McCain told us why early education is a must for every child. Toronto First Duty shows us how it can be accomplished.

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Toronto First Duty: A Decade of Research and Development

Carl Corter • Janette Pelletier

Overview of Toronto First Duty

The Toronto First Duty (TFD) demonstration project was designed to test the feasibility and effects of a universal model for integrating child care, kindergarten, family support and other services in school-based community hubs. The intent of the project partners—the Atkinson Charitable Foundation, the Toronto District School Board and the City of Toronto Children's Services—was to mobilize knowledge to improve early childhood programs and policy at both the local and provincial levels. A university-based research team at the Dr. Eric Jackman Institute of Child Study has worked over the last decade to evaluate the implementation process and outcomes of the project, and has contributed to the knowledge mobilization for practice and policy change. The research has provided positive evidence on the feasibility of implementing the model, as well as evidence about the processes that work through program and family pathways to enhance child development and parenting. These findings are reported on the City of Toronto website at http://www.toronto.ca/firstduty/reports.htm, and in a variety of academic and professional reports. For a recent summary of evidence and its relation to policy, see Corter and Pelletier (2010) and Pelletier (2012).

Findings from the project have helped to change provincial policy in Ontario and elsewhere in Canada. Although fixed models may not apply to new contexts, some of the evidence-informed design principles from this project converge with findings from other jurisdictions. These findings have broad implications for policies promoting universal, integrated service systems for early childhood. A prime design principle in the success of the TFD model is the provision of a cohesive universal platform to improve the reach and quality of currently fragmented services. This design principle is receiving attention across Canada as part of an investment strategy in the early years (e.g., Pascal, 2009) and is strongly supported by the Early Years 3 report (McCain, Mustard & McCuaig, 2011) in terms of the science of early human development, economic analysis and converging international evidence on effective early childhood programs.

Universal full-day kindergarten for four- and five-year-olds in Ontario is a bold start in this direction, with its steps toward integrating elements of school and care and with an integrated workforce of early childhood educators and teachers. However, even bigger steps have been taken elsewhere in Canada (McCain, Mustard & McCuaig, 2011). International evidence also points toward the value of a platform supporting young children and their families. In particular, community-based centres offering programming for both children and parents benefit both child development and parenting (Melhuish, Belsky, & Barnes, 2010). In addition, programs integrating two-generation services and those combining preschool education and child care provide promising evidence of benefits (Siraj-Blatchford & Siraj-Blatchford, 2009).

TFD began in 2001 as a demonstration project testing an ambitious model of service integration across early childhood programs: child care, kindergarten and family support in school-based hubs. Other services, such as public health, were also part of the service array. The goal was to develop a universally accessible service model that promotes the healthy development of children from conception through primary school, while at the same time facilitating parents' work or study and offering them support to their parenting roles. Beyond the investment in better outcomes for children and family life, the "First Duty" name suggests a moral purpose. In fact, John Ruskin, a British social philosopher, wrote in 1857 that "the first duty of a state is to see that every child born therein shall be well housed, clothed, fed and educated, till it attain years of discretion" (Metro Task Force on Services to Young Children and Families, 1997).

The intensive research design built into TFD from the beginning included both process and outcome evaluation through mixed methods, case study and quasi-experimental methodologies (Corter et al., 2007). The aim of the project was to generate evidence that could be mobilized in different ways to improve practice and policy. Over the course of the project, formative findings were fed back to project sites to allow leaders and practitioners to work on improving programming and delivery as part of a research and development approach following the principles of "design research" (Pelletier & Corter, 2006). In this mixed methods approach, findings are continuously fed into design and delivery improvements in an iterative fashion. At the same time, findings on the implementation process, showing how an existing fragmented system could be integrated to improve program quality and outreach to the underserved, were shared with different levels of government (from municipal to provincial), along with other stakeholder groups in education and social services. As outcome findings began to emerge for children and parents and for program quality, they were also shared with policy and practice stakeholders.

Phase 1 of TFD, which included implementation of the model in five community sites, concluded in 2005 (Corter et al., 2007). Phase 2, covering the period 2006 to 2008 (Corter et al., 2009), focused on knowledge mobilization, policy change and further development of the TFD model in one of the original five sites, Bruce WoodGreen Early Learning Centre. Phase 3, the focus of this report, involved intensive research on integrated staff teams and learning

environments in full-day early learning kindergarten programs, additional studies on integration of community services for young children and further analysis of outcomes from the extensive database on participants from the five Phase 1 TFD community sites.

The following overview of findings is organized around the evidence that processes working through two pathways—program improvement and parent support and outreach—led to positive outcomes for child development and families.

A Decade of Evidence[1]

Program Improvement

In the TFD model, integrated early learning environments were constructed at each community site by teams of different professionals working together—family support and child care professionals, along with kindergarten teachers. The Phase 1 research began with case studies describing the implementation process in terms of variations and adaptations of the model across the five communities, as well as common struggles and eventual successes across the sites (Corter et al., 2007). Challenges included issues related to professional turf when different professional groups began working together, missing the nuts and bolts of space and funding, staffing and leadership turnover and working without system support for integration across sectors that are themselves not integrated at higher levels of government. Nevertheless, the findings also showed successes. For example, strong leadership and time to meet allowed staff teams to come together over time to improve program quality and delivery.

In terms of the process of moving from separate to integrated service delivery, comparisons across the implementation period showed that progress was made in each of the sites on five dimensions of service integration (staff team, programming, access points, local governance and parent involvement), as indexed by an Indicators of Change measure developed during the project (Pelletier & Corter, 2006; Corter et al., 2007). In addition, ECERS-R (Harms, Clifford, & Cryer, 1998) results revealed program quality improvement. Finally, case study analysis over TFD Phases 1 and 2 revealed a strong positive association between staff teamwork and program quality (Corter et al., 2009).

Parent Support and Outreach

Parent involvement was a core element of TFD design for service integration. Various lines of evidence showed gains for parents from the TFD experiment that went beyond client satisfaction. For example, converging evidence from interviews and surveys with parents, site management and staff members documented improvements in parental input into the design of and access to services over the course of project implementation (Patel, Corter, & Pelletier, 2008).

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[1] Adapted from Corter and Pelletier (2010) with the permission of the publisher.

Another line of evidence examined potential effects of the TFD experience on parent involvement in learning and school. A body of evidence indicates that parents' participation in their child's education—reading to the child, talking to the child about school and meeting with staff to assess student progress—is related to school success (Corter & Pelletier, 2005). The preschool period and parent participation in preschool services may build capacity for parents' later involvement in school and other community services. To assess whether TFD affected parent involvement, we surveyed a sample of parents of kindergarten-aged children in TFD sites and demographically matched comparison sites (Patel & Corter, 2012). The quasi-experimental comparison of TFD parents with parents at schools with kindergarten only, or kindergarten and a single family support service, showed that TFD parents were more likely to feel empowered to talk to their child's kindergarten teacher and to help their child learn at home. This capacity building worked for parents who were new to Canada as well as for those born in Canada.

Beyond the direct experience and involvement in early childhood programs and school, does service integration improve everyday family life and children's experiences? To answer this question, we employed a quasi-experimental design to compare the daily experiences of parents and children accessing integrated TFD services versus families using traditional, separate kindergarten and child care services in demographically matched communities (Arimura & Corter, 2010). Parents provided information about daily routines, daily parenting hassles, social support networks and views about early childhood services via interviews and surveys. Children also reported their views about their daily routines through interviews. Findings indicated that service integration is associated with lower levels of daily parenting hassles in navigating between child care and school, greater satisfaction with some forms of support and greater levels of continuity in children's days. It is especially notable that parents in TFD sites named both kindergarten teachers and early childhood educators as part of their social support network. In comparison sites, only early childhood educators were named. Children in TFD sites spoke about their experiences in a seamless way. In contrast, several children from the non-integrated sites noted differences between their experiences at school and at the child care centre (e.g., "We have to learn a lot in kindergarten but we mostly play at daycare").

Although TFD improved family life and connections to school, was community outreach and participation in the programs equitable? In Toronto there are clear gaps in preschool service use for many minority groups (O'Reilly & Yau, 2009), but the integrated hubs in TFD appeared to eliminate these gaps with focused efforts on outreach (Pelletier & Corter, 2005; Patel, Corter, & Pelletier, 2008). Intake and tracking data on who enrolled at TFD sites and their service usage showed that the uptake of services reached across the demographic diversity of TFD neighbourhoods.

The profile of TFD users matched neighbourhood demographics in terms of maternal education and immigration status. For example, since TFD sites tended to be situated in higher-risk neighbourhoods with lower socioeconomic (SES) levels and more immigrant families, more than half of TFD users spoke English as an additional language. Nevertheless in one site where the school straddled a demographic divide between an affluent, established neighbourhood and a low-income neighbourhood with more immigrant families, the universal TFD programs drew equally from both sides of the divide, attesting to the popularity of the universal approach. Importantly, the findings of program benefits for parents and children held equally across demographic groups defined by language status and maternal education (Patel, 2009). These issues are further addressed by the findings reported in Chapter 2 of this report.

Child Outcomes

Given increased program quality and coherence, greater parent involvement and reduced stresses on families, better outcomes for children should result. In fact, evidence for short-term positive effects of the TFD model were found on children's social-emotional development on the Early Development Instrument (EDI), a widely used teacher assessment tool that assesses school readiness at the end of kindergarten (Corter, Patel, Pelletier, & Bertrand, 2008). These associations were seen in both pre–post comparisons within TFD sites and in quasi-experimental comparisons with demographically-matched communities. A case study of one site showed how an integrated staff team used EDI school-level profiles, along with formative feedback on program quality, to target and improve programming. Over the course of implementation, the integrated program environment quality ratings and EDI scores improved in relevant areas assessing quality of interaction and social–emotional development. Further findings on child outcomes are reported in Chapter 2 of this report.

In addition to participating in standardized assessments and ratings, children were interviewed about their experiences in the TFD project (Corter, 2007), on the principle that children's voices should be among those heard in early childhood program evaluations (Lansdown, 2005; Smith, Duncan, & Marshall, 2005). Children were asked to tell about their day at the site from the time they got there until they went home, and were asked what kinds of things they did at the site. Specific probes included asking what they liked and didn't like and what they were good at and not so good at. An important point is that "play" was the most common answer to the question "what do you like best?" Academic-related activities, crafts, etc., had less appeal. Interestingly, play also led the list of things that children "don't like." Play can go badly when other children "don't let you play" or "don't play nice." These findings are a reminder that children's motivations and experiences need to be taken into account in programming and monitoring, a point we expand in Chapter 4 of this report.

References

Arimura, T. & Corter, C. (2010). School-based integrated early childhood programs: Impact on the well-being of children and parents. *Interaction, 20*(1), 23-32.

Corter, C. & Pelletier, J. (2005). Parent and community involvement in schools: Policy panacea or pandemic? In N. Bascia, A. Cumming, A. Datnow, K. Leithwood & D. Livingstone (Eds.), *International handbook of educational policy* (pp. 295-327). Dordrecht, the Netherlands: Springer.

Corter, C. & Pelletier, J. (2010). Schools as integrated service hubs for young children and families: Policy implications of the Toronto First Duty Project. *International Journal of Child Care and Education Policy, 4*(2), 45-54.

Corter, C. & Peters, R. (2011). Integrated Early Childhood Services in Canada: Evidence from the Better Beginnings, Better Futures (BBBF) and Toronto First Duty (TFD) Projects. In R.E. Tremblay, R.G. Barr, R. DeV. Peters & M. Boivin (Eds.), *Encyclopedia on Early Childhood Development* [Online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2011:1-8. Available at: http://www.child-encyclopedia.com/documents/Corter-PetersANGxp1.pdf.

Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., et al. (2007). *Toronto First Duty Phase 1 Final Report: Evidence-based Understanding of Integrated Foundations for Early Childhood*. Retrieved September 28, 2010, from http://www.toronto.ca/firstduty/tfd_phase1_finalreport.pdf.

Corter, C., Patel, S., Pelletier, J., & Bertrand, J. (2008). The Early Development Instrument as an evaluation and improvement tool for school-based, integrated services for young children and parents: the Toronto First Duty Project. *Early Education and Development, 19*(5), 1-22.

Corter, C., Pelletier, J., Janmohamed, Z., Bertrand, J., Arimura, T., Patel, S., et al. (2009). *Toronto First Duty Phase 2, 2006-2008: Final Research Report*. Retrieved October 14, 2010, from http://www.toronto.ca/firstduty/TFD_phase2_final.pdf.

Harms, T., Clifford, R.M., & Cryer, D. (1998). *Early childhood environment rating scale*. New York: Teachers College Press.

Lansdown, G. (2005) *Can you hear me? The right of young children to participate in decisions affecting them* (Working Paper No. 36). Hague, the Netherlands: Bernard van Leer Foundation. Retrieved November 22, 2010, from http://www.bernardvanleer.org/Can_you_hear_me_The_right_of_young_children_to_participate_in_decisions_affecting_them.

McCain, M.N., Mustard, J.F., & McCuaig, K. (2011). *Early Years Study 3: Making decisions, taking action*. Toronto: Margaret & Wallace McCain Family Foundation.

Melhuish E., Belsky J., & Barnes J. (2010). Sure Start and its evaluation in England. In R.E. Tremblay, R.G. Barr, R. DeV. Peters, M. Boivin (Eds.), *Encyclopedia on Early Childhood Development* [Online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development, 1-6. Retrieved November 15, 2010, from http://www.child-encyclopedia.com/documents/Melhuish-Belsky-BarnesANGxp.pdf.

Metro Task Force on Services to Young Children and Families (1997). *The first duty: report of the Metro Task Force on Services to Young Children and Families*. Toronto: Municipality of Metropolitan Toronto. Available at: http://www.toronto.ca/children/report/firstduty/pdf/fd_1.pdf

O'Reilly, J. & Yau, M. (2009). 2008 *Parent census, kindergarten-grade 6: System overview and detailed findings* (Toronto District School Board Research Report). Retrieved November 22, 2010, from http://www.tdsb.on.ca/wwwdocuments/about_us/media_room/docs/2008ParentCensusK-6SystemOverviewAndDetailedFindings.pdf

Pascal, C. (2009). *With our best future in mind: Implementing early learning in Ontario (Report to the Premier by the Special Advisor on Early Learning)*. Government of Ontario. Retrieved November 20, 2010, from http://www.ontario.ca/ontprodconsume/groups/content/@onca/@initiatives/documents/document/ont06_018899.pdf.

Patel, S. (2009). *Integrated early childhood program participation, parenting, and child development outcomes: The Toronto First Duty Project*. (Doctoral dissertation, University of Toronto, 2009). Available at: http://hdl.handle.net/1807/18225.

Patel, S. & Corter, C. (2012). Building capacity for parent involvement through school-based preschool services, *Early Child Development and Care*, DOI:10.1080/03004430.2012.701625

Patel, S., Corter, C., & Pelletier, J. (2008). What do Families Want? Understanding their goals for early childhood services. In M. Cornish (Ed.), *Promising Practices for Partnering with Families In the Early Years. Family School Community Partnership Monograph series* (pp. 103-135). Charlotte, NC: Information Age Publishing.

Pelletier, J. (2012). New directions in integrated early childhood services in school-as-hub models: Lessons from Toronto First Duty and Peel Best Start. In N. Howe & L. Prochner (Eds.), *New Directions in Early Childhood Care and Education in Canada* (pp. 367-396). Toronto, ON: University of Toronto Press.

Pelletier, J. & Corter, C. (2005). Toronto First Duty: Integrating Kindergarten, Child-care and Parenting Supports to help Diverse Families Connect to Schools. *The Multicultural Education Journal, 15*(1), 89-116.

Pelletier, J. & Corter, C. (2006). Integration, innovation, and evaluation in school-based early childhood services. In B. Spodek & O. Sarracho (Eds.), *Handbook of research on the education of young children* (3rd ed., pp. 477-496). Matwah, NJ: Lawrence Erlbaum.

Peters, R. DeV., Bradshaw, A. J., Petrunka, K., Nelson, G., Herry, Y., Craig, W. M., et al. (2010). The "Better Beginnings, Better Futures" ecological, community-based early childhood prevention project: Findings from grade 3 to grade 9. *Monographs of the Society for Research in Child Development, 75*(No. 3).

Siraj-Blatchford, I. & Siraj-Blatchford, J. (2009). *Improving development outcomes for children through effective practice in integrating early years services: knowledge review 3*. London: Centre for Excellence and Outcomes in Children and Young People's Services.

Smith, A., Duncan, J., & Marshall, K. (2005): Children's perspectives on their learning: exploring methods. *Early Child Development and Care, 175*(6), 473-487.

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Further Findings from TFD Phase 1: Equity, Participation and Benefits

Sejal Patel[1] • Carl Corter

Overview

This chapter examines questions about equity of participation and whether participation in integrated early learning environments benefits children. The analyses to answer these questions employed the extensive database from the five sites studied in TFD Phase 1. The community control comparisons described earlier in Chapter 1 of this report (e.g., Corter, Patel, Pelletier, & Bertrand, 2008; Patel & Corter, 2012a) suggested benefits for children and parents; in the new analyses reported here, we employed dose-response analyses within the group of families using TFD to assess potential program effects. Dose-response analyses refer to the dose or total hours of participation and its relation to children's developmental outcomes. The database for this analysis also allowed us to examine whether participation in TFD was equitable and reached across demographic strata.

After applying various demographic controls, we found that more intense use (number of hours of TFD services) predicted children's cognitive, language and physical development (Patel, 2009). In other words, the bigger the dose, the bigger the benefit. The links between more time in TFD programs and more positive child outcomes held across maternal education levels and language status. Program use was generally independent of demographic factors. Predictors of participation in TFD also showed that the program goals of outreach and equitable access were achieved since demographic factors, including speaking English as an additional language, did not predict participation, with one exception. Maternal education did predict participation levels, but in the opposite direction usually reported in the literature (e.g., Cunningham et al., 2000). In this case, the lower the mother's education level, the greater the likelihood of higher participation. This finding may reflect TFD's features of outreach to underserved families and tailoring of programming to family needs, including child care for parents.

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Background

The new analyses reported here not only provide additional tests of the effects of the TFD model, but are also relevant to important issues in the literature on early childhood program effects, including how long and how often children attend (Chang & Romero, 2008; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2010). Research has demonstrated that preschool program participation is associated with children's developmental success, in comparison with interventions at school age, and these studies have also found evidence of a duration effect (e.g., Carolina Abecedarian Project – Campbell & Ramey, 1995; Chicago Child-Parent Centers – Reynolds, 1994, 1998; Sylva et al., 2010). That is, children who participated for more prolonged periods (measured by additional extra treatment in the primary years or number of years of participation) had the largest benefits. However, what is much less clear is whether or not the intensity or degree of participation in services matters (Reynolds, 1994). In other words, enrolment is not the same as attendance. There has been no research examining dose-response effects in integrated school-based early childhood services.

The TFD data in these analyses came from Early Development Instrument (EDI) kindergarten rating scores supplied by the Toronto District School Board and from participation data available through an intake and tracking system developed by the City of Toronto, which provided continuous quantitative and qualitative data on TFD participants (Corter et al., 2006). The intake and tracking database included information over a three-year period on 2643 children and their parents who participated across the five TFD sites (Patel, 2009). Families completed an intake form asking questions related to their demographic characteristics, as well as descriptions of their goals and experiences in accessing programs and services (Corter et al., 2007; Patel, Corter, & Pelletier, 2008). After intake, participation of individual families was tracked through ongoing recording by program staff (Patel, 2009). Results comparing the demographic characteristics of those families participating in TFD services and the general population of families in the surrounding community found that the parental clientele represented in the TFD intake and tracking database matched the demographics of the populations averaged across the five sites in terms of educational level and immigrant status (Corter et al., 2006). Thus it appears that overall, families who participated in TFD were representative of the surrounding community. However, what remained to be determined was whether the intensity with which TFD families participated in the menu of services varied by demographic characteristics. This has implications for outreach and equity (Patel, 2009).

Dose-Response Analyses

We employed dose-response analyses within the group of families using TFD to assess potential program effects (Patel, 2009; Patel & Corter, 2012b). We applied various demographic controls and used generalized linear modeling techniques to analyze a linked dataset, including: (1) systematic intake and tracking

information, (2) Early Development Instrument teacher ratings of child development across five domains and (3) a measure of service integration levels across sites. We found that more intense use of TFD services (number of hours of service use) predicted child development outcomes across the following domains: language and cognitive development; communication and general knowledge; and physical health and well-being (Patel, 2009; Patel & Corter, 2012b). The links between TFD experience and more positive child outcomes held across maternal education levels and language status.

Program use was generally independent of demographic factors. Ecological complexities were demonstrated in these analyses, with demographic and parenting factors predicting each of the domain-specific child development outcomes in different ways, with unique interactions. For example, children's social competence was predicted by an interaction between language status and parents' interest in school involvement. For families who spoke English as a first language, greater interest in school involvement predicted higher levels of social competence in children, but the inverse relation was found for families who spoke another language at home. Parents who spoke English as an additional language were more likely to be involved when their children were lower in social competence. Thus, families' reasons for parent involvement in services may vary by family demographic characteristics, such as language status and maternal education level. These findings demonstrate the ecological complexities in understanding the potential processes or mechanisms by which program participation affects children's outcomes (Patel, 2009; Patel & Corter, 2012b).

Analyses of Program Participation

In addition to examining predictors of domain-specific child development outcomes, we also explored factors that predicted participation itself, and whether participation worked equitably for children in marginalized groups. In this study, analyses of participation distinguished between optional services and kindergarten. Although kindergarten is not mandatory in Ontario, enrolment in free public senior kindergarten is nearly universal (TDSB, 2008). In contrast, enrolment in other public services, such as family support programs and expensive quality child care, is considerably lower.

We analyzed predictors of kindergarten absences in parallel with predictors of TFD participation in optional programs to test whether these forms of participation have similar barriers and facilitators (Patel, 2009; Patel & Corter, 2012c). The results provide evidence that TFD achieved its outreach aims in ensuring equitable access; demographic factors did not operate to reduce equitable participation in TFD. In fact, there was only one significant demographic predictor of hours of TFD service uptake: lower maternal education actually predicted higher participation. This success in outreach mirrors our previous finding that participant demographic characteristics matched the surrounding school communities (Corter et al., 2007). Parallel analyses comparing predictors of children's kindergarten program absences yielded similar results in that parenting

and site level program factors were not significant predictors (Patel, 2009; Patel & Corter, 2012c). Furthermore, maternal education was also inversely related to kindergarten attendance. However, there was one difference between participation in kindergarten and other TFD services—gender affected kindergarten absences, with males being absent more in kindergarten, but this relation was not found in optional TFD services. These findings on participation have implications for outreach and retention in early childhood service initiatives.

Conclusions

The results provide evidence that TFD achieved the goal of equitable access for all families. Furthermore, participation dose predicted children's physical health and well-being, language and cognitive development, and communication and general knowledge, after taking into account demographic, parenting and site factors. Findings were not qualified by the degree of service integration across TFD sites; all five sites had moved to substantial levels of collaboration or integration across implementation of TFD.

References

Campbell, F.A. & Ramey, C.T. (1995). Cognitive and school outcomes for high-risk African-American students at middle adolescence: Positive effects of early intervention. *American Educational Research Journal, 32*(4), 743-772.

Chang, H. & Romero, M. (2008). *Present, engaged, and accounted for: The critical importance of addressing chronic absence in the early grades*. National Center for Children in Poverty. Available at: http://www.nccp.org/publications/pub_837.html.

Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., et al. (2006). *Toronto First Duty Phase 1 Summary Report: Evidence-based understanding of integrated foundations for early childhood*. Available at: http://www.toronto.ca/firstduty/TFD_Summary_Report_June06.pdf.

Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., et al. (2007). *Toronto First Duty Phase 1 Final Report: Evidence-based Understanding of Integrated Foundations for Early Childhood*. Available at: http://www.toronto.ca/firstduty/tfd_phase1_finalreport.pdf.

Corter, C., Patel, S., Pelletier, J. & Bertrand, J. (2008). The Early Development Instrument as an evaluation and improvement tool for school-based, integrated services for young children and parents: The Toronto First Duty Project. *Early Education and Development, 19*(5), 1-22.

Cunningham, C.E., Boyle, M., Offord, D., Racine, Y., Hundert, J., Secord, M., et al. (2000). Tri-ministry study: Correlates of school-based parenting course utilization. *Journal of Consulting and Clinical Psychology, 68*(5), 928-933.

Patel, S. (2009). *Integrated early childhood program participation, parenting, and child development outcomes: The Toronto First Duty Project*. (Doctoral dissertation, University of Toronto, 2009). Available at: http://hdl.handle.net/1807/18225.

Patel, S. & Corter, C. (2012a). Building capacity for parent involvement through school-based preschool services. *Early Child Development and Care*, DOI:10.1080/03004430.2012.701625

Patel, S. & Corter, C. (2012b). *"Dose-Response" Relations between Participation in Integrated Early Childhood Services and Child Outcomes: Ecological Complexities*. Manuscript in preparation.

Patel, S. & Corter, C. (2012c). *Equity in outreach: An investigation of program participation*. Manuscript in preparation.

Patel, S., Corter, C., & Pelletier, J. (2008). What do Families Want? Understanding their goals for early childhood services. In M. Cornish (Ed.), *Promising Practices for Partnering with Families In the Early Years*. Family School Community Partnership Monograph series. Charlotte, N.C.: Information Age Publishing, pp. 103-135.

Reynolds, A.J. (1994). Effects of a preschool plus follow-on intervention for children at risk. *Developmental Psychology, 30*, 787-804.

Reynolds, A.J. (1998). The Chicago Child-Parent Centers: A longitudinal study of extended early childhood intervention. In J. Crane (Ed.), *Social programs that work* (pp. 110-147). New York: Russell Sage Foundation.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2010). *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project*. London: Routledge.

3

The Bruce WoodGreen Case Study, TFD Phase 3

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With support of the BWELC team

Overview

Toronto First Duty is a decade long research project that has studied the integration of kindergarten, child care and family supports delivered by a collaborative partnership that brings together the local school, multi service provider and a host of other resources (see Corter & Pelletier, 2011; Corter & Peters, 2011; and Arimura et al., 2011 for overviews). The overall research report features findings based on evidence gathered systematically over the last two years, including data sets on child and program observations, key informant interviews, focus groups and assessment tools that measure the quality and integration level of the program. Although Toronto First Duty used a mixed methods approach to gather evidence at a number of full-day early learning sites, this chapter focuses on an overview of lessons learned at the Bruce WoodGreen Early Learning Centre (BWELC). This centre was the continuing demonstration site of TFD in Phases 2 and 3. Recent results continue to show that teamwork within an integrated early learning environment requires both program and pedagogical leadership. Access to regular professional learning opportunities that maximize evidence-based practice strengthens high quality programs. The educators' ability to understand and use a variety of tools that measure quality of programming and curriculum implementation enabled them to deliver well-rounded early learning experiences that support children's self regulation and learning.

Background

As Ontario proceeds with its plan to implement full-day early learning kindergarten programs for all four- and five-year-old children, the evidence on integrating children's services with family supports within a school environment poses questions and challenges not only on the most practical level, but also on a policy level for educators, parents and government. Unlike any other full-day school-based early learning program within the Canadian context, Ontario's Full-Day Kindergarten Program established a joint teaching team, bringing

together early childhood educators and elementary school teachers into one classroom environment in over 900 schools. This precedent-setting decision to change the face of the early learning profession may create significant challenges for implementation, but it may also provide potential new benefits to the early learning environment, and to a re-defined profession cementing the value of expertise brought forward by both sets of early childhood practitioners. The combined expertise in child development, curriculum planning and assessment enable collaboration toward a pedagogical approach that builds on the knowledge and expertise of each professional.

Early childhood educators and teachers share similar interests in the development and learning needs of young children; however, in Ontario their preservice training is considerably different. For the most part, early childhood educators complete a two-year diploma program at a community college, but many complete a degree in early childhood education. Kindergarten teachers generally complete a four-year undergraduate degree and then spend less than a year in teacher education. ECEs generally have more direct training in child development, but teachers have a stronger foundation in Ministry of Education and school board curriculum, assessment and learning expectations. According to the Elementary Teacher's Federation of Ontario, one-third of kindergarten teachers have early childhood training, and many of these teachers have completed additional qualification courses in kindergarten training.

Against this backdrop, a number of research findings support the critical importance of advanced teacher training with a particular focus on early childhood development and preschool programming. For example, in a study linking teacher education to preschool quality, Barnett (2004) found that:

> Teacher preparation in early childhood education was effective in improving teacher behavior … they expressed greater warmth for the children and greater enthusiasm for the activities they engaged in, they communicated more clearly with children, and they encouraged children to share and cooperate with their peers. They were less punitive with the children … [and] exhibited less apathetic and uninterested behavior (p. 5)

However, contradictory studies suggest that advanced degrees alone are not effective predictors of classroom quality (Early et al., 2007), and ongoing professional development in early childhood is also important. In his report to the Premier of Ontario, Pascal (2009) explored a variety of staff models for the new full day early learning program and concluded that:

> A blend of Kindergarten teachers and ECEs would work best for the Early Learning Program. The team was the choice of hundreds of parents and educators who shared their experience and expertise with me. Educator teams have been found to add to the strengths of the professional preparation and skill sets of both teachers and ECEs (p. 33).

This historic decision combines the skills and expertise of two education professionals and recognizes the important contribution that both educators offer. In fact, it has historical backing in data collected for the Ontario MOE *Exemplary Kindergarten* study (Corter & Park, 1993). In a study of integrated care and education in several provinces, Johnson and Mathien (1998) found further evidence of economic benefit when program costs for child care and kindergarten were integrated. Their study also reinforced higher ratings in standards of quality in integrated programs. In more recent research reports, a number of countries, including Australia, Finland and parts of Canada, are considering effective approaches to blending early childhood training. However, there are a number of questions about what it will take for this approach to be successful and what infrastructure supports are necessary to ensure full collaboration and blending of traditionally separate professions.

One model upon which program and policy experts interested in professional training can draw is the Toronto First Duty project, a collaboration among the City of Toronto, the Toronto District School Board, the Atkinson Charitable Foundation, the Ontario Institute for Studies in Education and its Dr. Eric Jackman Institute of Child Study and Atkinson Centre and a host of community partners. In the first phase of TFD, a clear gap in the professional training of educators was noted. The researchers found that "early childhood professionals generally are not trained for interdisciplinary collaboration, much less for the kind of 'trans-disciplinary' work envisioned in TFD, where there are overlapping roles and seamless staff teams" (Corter et al., 2007, p. 42). At each of the TFD sites, staff teams negotiated the individual relationships that required a shift from working within a professional silo into an effective and collaborative professional team. The support of the leadership and joint professional learning were key to the program's success.

In the case study of the BWELC in Phase 2 of TFD, a noticeable dip was evident in both integration and program quality. Factors that led to these issues included a shift away from practices such as joint hiring and joint program planning time, as well as human resources pressures. These results precipitated a concentrated effort by the early years team to reconsider their own professional commitment to integration. Again, this was not grounded in any formal training in how to work in an integrated professional team, but was based more on a program and policy expectation that all educators would function as a team to improve quality. Under the guidance of the principal and the early years coordinator, "the early years team underwent an intensive process of recalibrating the program, re-focusing their goals and re-envisioning their professional commitment to an integrated early learning environment for the children that included the active involvement of parents" (Corter et. al., 2009 p. 12).

At this juncture, teacher training and early childhood professional preparation programs do not have a specific focus on working together as a collaborative team, although there is growing professional development designed to support this need. The TFD research project serves to inform policy development, pro-

fessional learning and improved practices for integrated early learning environments.

Toronto First Duty

TFD combines kindergarten, child care and parenting supports into a seamless full-day integrated model for young children and their families. Three phases of TFD research describe the design, implementation and impact of this early learning model (www.toronto.ca/firstduty). In particular, evidence from the Phase 3 study provides important lessons to help inform provincial policy. The shared knowledge that kindergarten teachers and early childhood educators bring to the findings is of particular relevance to emerging provincial policy concerning early learning. TFD Phase 3 details the story of the BWELC, housed in Bruce Public School, integrated with WoodGreen's child care and community based programs and the Toronto District School Board Parenting and Family Literacy Centre.

The findings are based on a detailed case study approach that included both quantitative and qualitative data collection with educators, children and partners throughout the research study. Qualitative data collection in Phase 3 included semi-structured interviews with program leaders, focus group meetings with educators and participant observation in BWELC steering committee meetings. Quantitative data included a review of the Indicators of Change data on integration progress (see TFD 2, Corter et al., 2009), an evaluation of the program environment in the preschool, kindergarten and parenting centre using the Early Childhood Education Rating Scale-Revised and an analysis of the City of Toronto Operating Criteria (see http://www.toronto.ca/children/dmc/OC08/9540.htm). Additional data were collected using a newly created tool called the Child Observation Framework, developed by the TFD and Best Start Research Teams (see Chapter 4 in this report). The goal of the Child Observation Framework was to evaluate child opportunities for self-regulation and play behaviour in Full-Day Early Learning-Kindergarten (FDEL-K) classrooms. Its purpose was to develop an approach to assist educators and researchers in observing and reporting children's self-regulation, learning and play behaviour.

The Early Years Team

In the full-day early learning program at Bruce School, two types of education professionals work collaboratively, demonstrating the benefits and the challenges of blending the expertise of both professions. The early years team brings together the kindergarten teacher, early childhood educators and additional special education and family supports to create a program intended to meet the needs of young children and their families. The team works within a seamless program model that is carefully planned, using observations of individual children to inform a curriculum process that embeds both the Ministry of Education's *Kindergarten Program* and the *Early Learning for Every Childhood Today*

curriculum framework. Both the early childhood educators and the teachers share program and evaluation responsibilities, engage with families formally and informally and establish a routine that includes joint planning time. However, program integration is not always a smooth ride and the research from TFD Phase 3 at BWELC found that the following factors are necessary to achieve success:

- Commitment from the entire early years team to program integration
- School and program leadership
- Supports and resources
- Time and space to meet
- Ongoing joint professional development
- Reciprocal mentoring and professional respect

An integrated program model brings together professionals who are committed to program practices that support optimal learning conditions for young children. In focus groups, both groups of professionals indicated that working together had been rewarding, although it could also be challenging. Interviews with teachers and early childhood educators described differentials in wages and benefits that often add to the unspoken inequity between the educators. However, the staff shared important lessons with the researchers. One significant and recurring theme was the importance of reciprocal mentoring and professional respect between educators to ensure success in integration.

During the focus groups, staff shared their experience working with a room partner who may have different expertise. According to one early childhood educator, "teachers seem to have a better understanding of how to evaluate specific skills to prepare them for the upper grades. We could benefit from that in ECE." This was evident in both the program quality measurements in ECERS-R and in tools that measure the level and quality of interactions between children and adults. Interviews with the early years educators indicated recognition that both professionals could learn from each other's knowledge base. However, what became absolutely clear through evidence gathering was the level of reciprocal respect for each other's skills and expertise. For example:

> I know a lot of times, kindergarten teachers feel isolated because their curriculum is different from the rest of the school's so it's nice to work with people who are working with the same children. You don't feel isolated because you can talk about issues and get ideas on how to communicate with parents. (Kindergarten Teacher)

The team brings a broader range of expertise to the classroom and allows for more individualized attention for the children. After-school programming for older children is offered at the site. The continuity of consistent adults is viewed

as important, particularly for children in the earlier years. According to one early childhood educator:

> From the beginning of the child's day in the same classroom, you can assume it is less stressful for the kids and parents. The child has the security of having his staff members for the entire day. The educators have a sense of the child's needs and have learned to merge interests and knowledge. It's been an excellent learning opportunity.

The challenges for an integrated early years team

Both the kindergarten teachers and the early childhood educators raised a number of common issues, including the need for people on the team to want to work collaboratively. Findings from Toronto First Duty Phase 1 suggested that some teams that didn't want to collaborate in the beginning developed a collaborative approach by having time to meet where they discovered common goals for children and for program improvement. Without a common goal in mind, at times the practice of integrated teaching became unnecessarily arduous. According to an early childhood educator:

> I think one of the biggest challenges I have found is (not) having a team that buys into the model and that could be either the ECEs or the teachers because as an ECE there is a feeling that you are doing the same job as someone in the room who is making quite a lot more money than you. So that's definitely a challenge for myself personally. I am willing to overlook that piece because I feel this is the best place for me to better my career in the long run. But I have also worked with staff/teachers that don't buy into this program and it makes it difficult to have a collaborative approach when you have two people coming from two different worlds.

Another early childhood educator questioned the teacher's pedagogical approach by stating:

> There are parts of her curriculum that don't necessarily follow our (ECE) philosophy. And when I say that I am talking about the amount of pre-cut out things. I understand the need for the repetitive nature of letter books is going to allow the children to learn *but* changing it up would enhance that experience.

These two narratives suggest that taking the time to meet regularly, supported by pedagogical leadership, would create opportunities to resolve different approaches to planning and implementation. One educator suggested that when either a teacher or ECE is new to the program there needs to be time to transition and adapt to a new environment. Joint teaching teams may benefit from additional mentoring and advice from experienced educators by visiting

a demonstration school. She noted the teacher at the demonstration school had a lot of experience: "She took the Reggio approach and she had such practical ideas that I have actually implemented immediately and it has been wonderful" (Kindergarten Teacher).

Merging two professionals on a large-scale basis creates infrastructure challenges. However, these findings suggest that relational issues need to be addressed at the micro level as a way to prevent differences from becoming larger than necessary. The following section provides suggestions for effective program delivery.

Keys to Success

Central to an effective integrated curriculum framework is the opportunity for both educators to participate in consistent and joint program planning. The learning that takes place in the professional realm also falls along a continuum of activities ranging from self-reflective practice to joint delivery of workshops. In this particular case, the early childhood educator and teacher may have different pedagogical styles, but their interest in the children's development is at par. For example, during an interview with a kindergarten teacher, she described how she had developed new questioning strategies when working with young children. She stated, "the ECE teacher knows exactly the question to ask when she wants to expand on an idea." Siraj-Blatchford (2004) suggests that this pedagogical sharing of knowledge contributes to higher quality early years programs supported by an "effective pedagogue who orchestrates learning by making interventions such as scaffolding, discussing, monitoring which are sensitive to the curriculum concept" (p. 720). In the case of BWELC, the educators share expertise. However, curriculum leaders and principals can certainly operate as curriculum pedagogues who support the improvement of program delivery.

School and Program Leadership

As with any innovative model, leadership was paramount. School leaders juggle numerous administrative responsibilities while maintaining a leadership role in curriculum and pedagogy. In a team teaching environment that brings two professionals together, the leadership took on the additional responsibility of facilitating this new kind of teaching partnership. The role of the school principal and the early years coordinator was critical in setting the benchmark for what functioned as a true team approach to teaching and learning. The leadership's ability to demonstrate a collaborative working relationship seemed to influence the educators' desire to do the same. Just as the leadership role was important to demonstrate integration, the lack of leadership was also seen as problematic. For example:

> The first few meetings were better organized…because they were facilitated by an office staff member. The office provided staff relief so we could meet. This year I was noticing a difference because we never had a coordinated time to meet for program planning.

The need for joint planning time in a scheduled way was a consistent theme for the educators, and when made available, it seemed to defuse some of the program issues. All of the early years team members indicated that the role of the early years coordinator was just as important as the role of the principal, particularly since the principal is often managing a number of other school-related issues and the early years coordinator is focused on programs for younger children. Nevertheless, it is the principal who retains control of school management. As demonstrated in Toronto First Duty Phase 2, central to this process is a principal who understands the value of joint planning, teaching, collaborative practice, reciprocal learning and engaged learners (Corter et al., 2009).

The implications for labour negotiations are significant as we move toward a teaching team that includes one group of educators who are grounded in a provincial collective agreement that includes salary scales, consistent standards for benefits, access to prep time and ongoing professional service supports. On the other hand, early childhood educators are just beginning a process of collective organizing within school boards and as it currently stands, the differentials between salaries, benefits and working conditions will continue to have an impact on the ability of the educator team to work from the same program principles. Although teachers receive significantly more prep time, at TFD, joint prep time was provided because the leadership facilitated opportunities for the team of educators to meet. This was not a negotiated component of either collective agreement, although at a systems level, joint planning time would need to be assigned. It was understood from all levels of involvement that planning for joint program time was a fundamental component of building an effective teaching partnership.

Supports and Resources

The early years team identified two areas of support to enable the staff to work in a more seamless manner to support an integrated program for children. In the focus groups with educators, there was agreement by all participants that the availability of curriculum specialists provided a deeper exploration of curriculum planning and pedagogical practice that in turn improved the early years program. In response to a key question, "what kinds of supports are necessary in an integrated environment," one educator cited the value of an objective examination of the environment to improve the design of the program. She suggested, "The consultant from the city is there to monitor the program but also helps us think about how we are organizing the program." Although school board curriculum specialists tend to work more closely with teachers, within an integrated staff environment, both educators can benefit from this additional resource. At the same time, the early childhood educators likewise noted that this gave the teachers even more time to think and work on program plans outside the class, indicating they would benefit from this learning opportunity as well.

As part of the third phase of TFD, the program and research team turned their focus to how children with special needs could be more strongly supported

within an integrated environment. To frame the analysis, the researchers examined the program by administering the SpecialLink Early Childhood Inclusion Quality Scale. This tool was developed for assessing inclusion quality in early childhood centres and for helping centres move toward higher quality inclusion. As Pascal (2009) noted in his recommendations on full-day kindergarten, "all staff will be qualified to notice developmental delays, initiate appropriate responses and know when more specialized interventions are required" (p. 22). However, preliminary analysis demonstrated that in order to support children with special needs within an integrated program environment, all the educators need additional joint training to work closely together to ensure a more cohesive individualized program planning approach. To ensure this is possible, the early years team noted the need for joint professional development, especially to understand more deeply the learning needs of children with autism spectrum disorder and behaviour challenges.

Educator Training

The Phase 3 investigation also touched on issues of educator training. The integrated early learning program brought together educators with a variety of educational and professional training experiences. The team includes kindergarten teachers who have completed teacher training but who may also have additional qualification in early childhood development. The team also includes early childhood educators who have expertise in working with children with special needs. However, a fundamental difference between the two types of educators is the length of time of training and the content of training. During the study, the educators were asked if the type and length of training they received prepared them adequately for working in an early learning program. When exploring the validity of the educators' training, both professionals suggested that neither type of training alone was entirely adequate, reaffirming the findings of the Exemplary Kindergarten study two decades ago (Corter & Park, 1993). All the educators who participated in this study agreed that the most effective form of in-service training occurred when participating in joint professional learning. For example, educators made the following comments about their training:

> The really big piece is the difference in training. Quite a lot of teachers are not comfortable with the early years, especially four- and five-year-olds. They don't have the developmental piece and the knowledge of child development. For a lot of teachers who have not taught kindergarten before, it is quite intimidating and overwhelming. (Early Childhood Educator)

> Teacher education should have different entry requirements. Experience should be taken into account—it's not just about grades. TFD is starting to be discussed. Focus on kindergarten is changing in education, but teachers are really prepared with an ECE degree or MA at ICS—more knowledge and more prepared. AQ in ECE is good but perhaps build more ECE training. Although it seems intense, they seem more knowledgeable. (Kindergarten Teacher)

One teacher described the ECE training program as very strong, but acknowledged, "they could train more on assessment, reporting and the administrative requirements" (Kindergarten teacher). This is certainly valuable information for early childhood educators employed by school boards who are now required to operate under the Education Act and not the Day Nurseries Act. Teachers become quite accustomed to dealing with a myriad of expectations, including standards under the Ontario College of Teachers, individual school board policies, obligations under collective agreements and rather specific requirements to ensure that when children are promoted to the upper grades, they meet minimum learning standards.

In the focus groups, the teachers recognized the multitude of supports they receive from their local school board, although they also clearly stated the inadequacy of these supports. When asked for recommendations on how to improve ECE training, a teacher suggested better understanding of literacy and numeracy development. She stated, "you can't always know this will be successful through emergent learning. Sometimes you have to plan for it." In a study of early childhood educators' preparedness to support mathematics education, Ginsburg, Lee and Boyd (2008) argue that ECE training needs to be more rigorous to include improved understanding of children's mathematical thinking. Similarly, although play-based learning may foster self-regulation (Diamond & Lee, 2011), not all early educators are trained in the tasks of monitoring and fostering this important area of development. These are relatively new areas of research and may raise red flags for practitioners concerned with programming that is overly structured. However, as more staff teams are integrated in school-based programs, these issues do need attention from policy makers.

In integrated early learning environments, the partnership between the educators is complex and dependent on a degree of reciprocal respect and mentoring. Over time, a desire to support each other's knowledge and expertise becomes inherent, but there remains a strong identity with the individual's professional association. There is growing recognition that the existing model of teacher training is inadequate as we move toward a more widely accepted notion that both early childhood and teacher training are important ingredients in a more cohesive early learning program. As the province of Ontario brings together early childhood educators and teachers in a teaching and learning partnership, lessons from the educators at Toronto First Duty can play a particularly important role in informing the policy and educational direction for the future learning needs of educators.

KEY RECOMMENDATIONS

- **Leadership** - Compassionate and knowledgeable leaders are important players who support ongoing professional learning and provide pedagogical leadership.
- **Curriculum Planning** - Joint planning time is critical to an integrated early learning program. The wide gap between teachers having over 200 minutes per week in planning time compared to approximately 60 minutes for early childhood educators creates significant discord. The joint planning time that teachers and early childhood educators have together is imperative to strengthening program curriculum and planning for individual children.
- **Mentorship** - Curriculum mentors provide advice, suggest innovative curriculum approaches and enable the educators to create an environment that supports self-regulation.
- **Professional Training** - Collaborative pre-service training and joint professional learning supports a culture of learning, peer support and knowledge transfer.

References

Arimura, T.N., Corter, C., Pelletier, J. Janmohamed, Z., Patel, S., Ioannone, P., & Mir, S. (2011). Schools as integrated hubs for young children and families. A Canadian experiment in community readiness: the Toronto First Duty project. In D.M. Laverick & M. Jalongo (Eds.), *Transitions to Early Care and Education: International Perspectives on Making Schools Ready for Young Children*. Springer International, 189-202.

Barnett, S. (2004). Better teachers, better preschools: Student achievement linked to teacher qualifications. *Preschool Policy Matters*, Issue 2 (December), p. 5.

Corter, C. & Park, N. (Eds.) (1993). *What Makes Exemplary Kindergarten Programs Effective?* Toronto: Ontario Ministry of Education and Training.

Corter, C. & Pelletier, J. (2010). Schools as Integrated Service Hubs for Young Children and Families: Policy Implications of the Toronto First Duty Project. *International Journal of Child Care and Education Policy, 4*(2), 45-54.

Corter, C. & Peters, R. (2011). Integrated Early Childhood Services in Canada: Evidence from the Better Beginnings, Better Futures (BBBF) and Toronto First Duty (TFD) Projects. In R.E. Tremblay, R.G. Barr, R. DeV. Peters & M. Boivin (Eds.), *Encyclopedia on Early Childhood Development* [Online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2011:1-8. Available at: http://www.child-encyclopedia.com/documents/Corter-PetersANGxp1.pdf.

Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., et al. (2007). *Toronto First Duty Phase 1 Final Report: Evidence-based Understanding of Integrated Foundations for Early Childhood*. Retrieved September 28, 2010, from http://www.toronto.ca/firstduty/tfd_phase1_finalreport.pdf.

Corter, C., Pelletier, J., Janmohamed, Z., Bertrand, J., Arimura, T., Patel, S., et al. (2009). *Toronto First Duty Phase 2, 2006-2008: Final Research Report*. Retrieved October 14, 2010, from http://www.toronto.ca/firstduty/TFD_phase2_final.pdf.

Diamond, A.A. & Lee, K.K. (2011). Interventions shown to aid executive function development in children 4 to 12 years old. *Science, 333*(6045), 959-964.

Early, D.M., Maxwell, K.L., Burchinal, M., Soumya, A., Bender, R.H., & Zill, N. (2007). Teacher's education, classroom quality and young children's academic skills; Results from Seven Studies of Preschool Programs. *Child Development, 78*(2), pp. 558-580.

Ginsburg, H.P., Lee, J.S., & Boyd, J.S. (2008). Mathematics Education for Young Children: What it is and how to promote it. *Social Policy Report, 22*(1).

Johnson, L. & Mathien, J. (1998). *Early Childhood Education Services for Kindergarten Age Children in Four Canadian Provinces: Scope, Nature and Future Models*. Ottawa: Caledon Institute of Social Policy.

Pascal, C. (2009). *With our best future in mind: Implementing early learning in Ontario (Report to the Premier by the Special Advisor on Early Learning)*. Government of Ontario. Retrieved November 20, 2010, from http://www.ontario.ca/ontprodconsume/groups/content/@onca/@initiatives/documents/document/ont06_018899.pdf.

Siraj-Blatchford, I. & Sylva, K. (2004). Researching pedagogy in English pre-schools. *British Educational Research Journal, 30*(5), pp. 713-730.

4

Children's Experiences in Full-day Programs for 4- and 5-Year-Olds: Play and Self-Regulation

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Overview

This chapter explores how play-based full-day programs for 4- and 5-year-olds contribute to children's classroom experiences, particularly in terms of their potential to develop self-regulation and social behaviour. Both play and self-regulation are important components of Ontario's Draft Full-Day Early Learning Kindergarten Program and Early Learning for Every Child Today (ELECT) documents, but effective implementation means understanding how they are translated into everyday experiences that foster learning and development. This chapter describes such experiences for children across several variations of full-day kindergarten programs, including the Bruce WoodGreen Early Learning Centre TFD model, George Brown Laboratory Schools offering full-day kindergarten programs and early implementation of Full-Day Early Learning Kindergarten (FDELK) programs in local school boards.

Overall, the findings indicated positive peer interactions and varied opportunities for the development of self-regulation across different types of play and high levels of engagement across small group and play periods during the school day. Nevertheless, there are questions about the role of socio-dramatic play in the development of self-regulation and ways in which other forms of play and activity may contribute. This chapter also addresses whether systematic efforts are needed to boost socio-dramatic play, given that it is not pervasive and given that other forms of play also appear to offer opportunities for the development of self-regulation.

Background

Ontario's Full-Day Early Learning Kindergarten Program has been launched in a time and context in which a growing body of evidence points to the importance of play and self-regulation in promoting healthy child development. Recent research suggests that both play and self-regulation are central to

children's capacity to learn and lead healthy lives (McCain, Mustard, & McCuaig, 2011). The research also suggests that play and self-regulation are linked developmentally, although other forms of activity besides play contribute to self-regulation (Diamond & Lee, 2011). Measures of self-regulation early in life have been shown to predict future academic success, physical and mental health, income, occupational attainment and prestige, substance abuse and criminal convictions (Duckworth, 2011; Mischel et al., 2011; Moffitt et al., 2011). The more a child is able to self-regulate, the more likely he or she is to live a life of increased well-being and to experience fewer setbacks. The implications of this research are significant and far-reaching. Accordingly, parents, schools, communities and policy makers need to respond to the question: What can be done to promote self-regulation in young children?

One approach proven to be effective in developing young children's self-regulation is purposeful play within a group setting, such as the kindergarten classroom (Bodrova & Leong, 2008; Elias & Berk, 2002). Indeed, recent studies indicate that adult-supported play-based programs can be successful in advancing the development of young children's self-regulation (Bodrova & Leong, 2008; Diamond, 2011; Diamond, Barnett, Thomas, & Munro, 2007). Furthermore, recent large-scale research from the UK suggests that overall program quality in early childhood settings, including appropriate provisions for play, is predictive of self-regulation in children who were followed to 11 years of age (Sylva et al., 2010).

During play, which includes a range of highly motivating forms, children develop and practice skills that are fundamental to what is often meant by self-regulation. Play can afford opportunities for children to think flexibly and imaginatively; engage in goal-directed behaviour; interact, negotiate and cooperate with peers; exercise focused and sustained attention; and, in the case of pretend play, inhibit acting out of character (a feat that is only possible if children remember and adapt to their own and others' roles). It is precisely these types of behaviours (flexible thinking, goal-directed behaviour, inhibitory control, focused attention) that theorists argue lie at the core of self-regulation (Baumeister & Vohs, 2011). Moreover, the quality of children's play has been shown to predict children's self-regulation and school readiness (Bodrova & Leong, 2008).

Collectively, the above research findings provide robust justification for investment in play-based programming. A simple equation might read:

self-regulation = critical for future academic success and overall well-being

play = effective means to develop self-regulation

therefore, increased opportunities for play = increased opportunities to develop self-regulation, thereby justifying investment in play-based programming

But of course, the issue of play-based learning and programming is not this simple. As suggested earlier, it is the *nature and quality* of children's play that fosters self-regulation and school readiness. Yet, at the moment, little is known about what differentiates effective forms of play. For example, writing about the *Tools of the Mind* approach, Blair and Diamond (2008) point out that even though this program has been found to foster self-regulating Executive Functions (EFs), it is not clear which aspects of teacher–child interaction or child–child interaction and which play experiences actually contribute to building self-regulation.

While some researchers argue that socio-dramatic play is the crown jewel of children's play and provides myriad learning opportunities, including optimal conditions to develop self-regulation (Elias & Berk, 2002), others argue that other forms of play (e.g., solitary constructive, parallel, etc.) are also important for development in the early learning context (Rubin, Coplan, Fox, & Calkins, 1995). There is also controversy over what is meant by play-based learning. At one extreme are those who interpret play-based learning to mean providing children with unstructured play opportunities, with minimal adult influence or interference (e.g., "free play"), while at the other extreme are those who view play-based learning as an opportunity to structure children's play for them, establishing rules and expectations to be followed during play. Further, "play-based" may be extended to "active learning" with materials and problems in instructional approaches, ranging from *Building Blocks* for math (Clements & Sarama, 2007) to the provision of print-rich environments to promote emergent literacy (Roskos & Neuman, 1993). The act of striking a balance between structured and unstructured play constitutes a great challenge for play-based programs. Play is a natural and motivating activity for young children, and while it is wise to use this naturally occurring feature of development to support learning and social emotional outcomes, there are unanswered questions as Ontario implements play-based programming across the province. A starting point is, "What does play-based learning look like?"

The purpose of this chapter is not to solve the issues noted above, but rather to provide a snapshot of play-based programming as it currently exists across seven full-day early learning kindergarten sites in the Greater Toronto Area (GTA). It is our hope that this information will prove valuable for ongoing reflection on and improvement of policy initiatives related to play-based programming in early learning contexts. We believe that it is laudable that the Ministry of Education (MOE) and its Early Learning Division have taken a continual improvement approach to the Draft Full-Day Early Learning Kindergarten Program.

Charting Self-Regulation and Play in Full-Day Early Learning Contexts

Given the central roles of play and self-regulation in Ontario's Full-Day Early Learning Kindergarten-Program (Draft) and related documents, such as Early Learning for Every Child Today (ELECT), a major goal of this study was to

describe the opportunities for play and self-regulation in play-based full-day programs. While the MOE documents describe effective programs as being "intentional, play-based," we need to be able to articulate what this looks like in the moment-to-moment experiences in the classroom. We wanted to move beyond descriptions of powerful individual play episodes to systematically look at the steady "drip" of everyday classroom experience.

To achieve this goal, the research team conducted detailed observations of 36 children across seven different full-day early learning sites within the GTA. These sites included the BWELC Toronto First Duty site, George Brown College (GBC) laboratory school sites offering full-day kindergarten programming and several classrooms where Full-Day Early Learning-Kindergarten had been implemented for at least five months. At the BWELC and FDELK sites, teams of kindergarten teachers and early childhood educators (ECEs) ran the classrooms; at GBC sites, teams of ECEs ran the class. All sites used play-based programming consistent with ELECT and the FDELK Program.

At each location, four to eight children were randomly selected for observation (at the two larger sites, eight children were selected). Continuous running records were completed during10-minute intervals while the child was engaged in each of four contexts—transition time, play, small group instruction and whole-group instruction—for a total of 40 minutes of running records per individual. To examine children's play and self-regulation behaviour, the TFD research team developed the Child Observation Framework (COF) to analyze the running records. Using each running record as the primary source of information, researchers completed the COF immediately following their in-class observations. Divided into two sections, Part A of the COF consists of a checklist of items related to self-regulation, while Part B consists of a checklist of items related to play behaviour.

Self-Regulation. Criteria for the inclusion of self-regulation items, along with the creation of a working definition of self-regulation, were based on a process of review of the following resources: *Early Learning for Every Child Today* (ELECT)(Best Start Expert Panel on Early Learning, 2007; With Our Best Future in Mind, *Every Child, Every Opportunity: Curriculum and Pedagogy for the Early Learning Program* (ECEO)(Government of Ontario, 2007) and the *Early Developmental Instrument* (EDI) (Janus & Offord, 2007). For the purposes of this report, we thus adopted a practice-oriented approach to self-regulation, as distinct from stricter research and theory-based approaches such as those that focus on core cognitive executive functions (EFs). In our approach, practice-oriented meant generating a working definition inductively from examining practice and policy documents. In this approach, self-regulation refers to the ability to adapt one's emotions, behaviours and attention to meet the demands of a given situation; it involves taking into account not only one's own thoughts and feelings, but those of others as well.

It is important to note that self-regulation is a multifaceted construct with definitions that vary across disciplines, methodological approaches (Baumeister & Vohs, 2011) and practice-friendly versions (Shanker, 2011). According to Shanker's (2011) model, widely disseminated in Canadian practice and policy contexts, self-regulation may best be viewed as operating across five different levels—biological, emotional, cognitive, social and reflective thinking skills—all of which are connected and potentially dependent on one another. The self-regulation items that appear in the COF reflect aspects of this model and others like it (see Baumeister & Vohs, 2011), as well as the belief that self-regulation behaviours may vary across contexts (free play vs. whole group). The 17 items included in the COF were categorized under three broad domains: Emotional/Motivational (five items), Social/Language (six items) and Cognitive (six items). Each item includes a brief description of the target behaviour, stated in the affirmative (e.g., *appears comfortable and confident in the classroom*), and is followed by classroom-relevant examples of that item (e.g., *does not appear overly shy, nervous or tense, is not hesitant to enter play situations*).[1] Children's overall self-regulation scores were expressed as the percentage of "yes" responses out of total opportunities to self-regulate.

Play Behaviour. The play section (Part B) of the COF followed a similar format. Episodes of play observed within each child's running record were coded into one of six categories: dramatic, cooperative, parallel/associative, solitary, onlooker and unoccupied. The frequency of episodes was calculated for each child.[2] Play observations are discussed further in the section, "What Does Play Look Like in Full-Day Kindergarten?"

Engagement. In addition to COF coding of opportunities for play and self-regulation, researchers also rated each focal child's overall engagement with activities during each observational block: transitions, small group instruction, whole group instruction and play. The rating summarized attentional, behavioural and motivational aspects of overall behaviour during the observations (Pagani, Fitzpatrick, & Parent, 2012). Ratings employed a three-point scale (1 = not engaged, 2 = somewhat engaged, 3 = very engaged), and assigned each child a score immediately following the observation.

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[1] For each item, the observer recorded "yes," "no" or "N/A." A "yes" response indicated that the child demonstrated the target behaviour across the observation blocks. A "no" response indicated that the child did not demonstrate the target behaviour and an "N/A" response indicated that there was no opportunity to observe the target behaviour. For all items in which relevant behaviour was observed ("yes" or "no") the researcher provided short written descriptions of the behaviour and described the episode and context in which it occurred (i.e., during small or whole group instruction, transition or play). For items occurring in multiple episodes, coders assigned either a "yes" or "no" response based on whether self-regulated behaviour predominated or not.

[2] If a play scenario changed from one type to another (for example, if two children initially engaged in parallel play with Lego blocks and then began to work cooperatively on joining their structures), both types of play were scored. Each child was given a percentage score for each of the six categories, which was calculated by dividing the number of episodes spent in the specific category of play by the total number of play episodes recorded for that child.

Role of Adults and Program Structure. In addition to collecting observational data on individual children using running records and the COF, several other methods of data collection were employed. This mixed-methods approach to data collection allowed for a comprehensive snapshot of play-based early learning environments. Continuous running records were also conducted at three of the seven sites while observing program management activities of teachers and early childhood educators.[3] As was the case with individual children, running records were conducted during 10-minute blocks while the educator was involved in transition time, play, small group instruction and whole group instruction. Thus, each educator was observed for a total of 40 minutes. Following a similar format as the COF, the Program Observation Framework (POF) was developed as a checklist measurement tool, used to assist in analyzing the running records. Divided into the following six sections, the POF provided detailed records of educators' program related activities as well as more general aspects of the program: (1) Emotional Support, (2) Classroom Organization, (3) Instructional Support, (4) Play, (5) Fostering Self-Regulation and Social Development in Children and (6) Interactions with Other Adults. Educators also took part in informal interviews during the observational visits.

We also documented the structure of programming and the physical learning environment using the Time Space Materials People (TSMP) instrument (Pelletier, Power, & Park, 1993). The TSMP includes a series of questions about how programming organizes children's time, space, material and the adults who children interact with (e.g., What are the rules for the use of space/centres? What are the adults doing while the children are eating? What happens during outdoor play?), as well as a series of observational items (e.g., sketch and photos of the classroom, room dimensions, approximate ratio of adults' space to children's space) and checklist responses (quality of children's books, etc.).

What Does Self-Regulation Look Like in Full-Day Early Learning Environments?

Observers recorded a total of 434 episodes presenting opportunities or situational demands for the exercise of self-regulation. This works out to an episode approximately every three minutes (36 children × 40 minutes for a total of 1440 minutes). Furthermore, children were judged to respond in a self-regulated way to the majority of these opportunities. Of the 434 instances observed, 75% (n = 327) were categorized as "yes," indicating a self-regulated response. The other 25% were scored as "no," indicating an absence of self-regulation.[4] Overall, this indicates a degree of success in self-regulation that also leaves room to grow (Shanker, 2011). Nevertheless, it should be noted that degree of success varied widely across individuals, as described further below. Figure 1 lists each self-regulation item in the COF in descending order according to the total number of children who had the opportunity to display that behavioural item during the

[3] Hereafter, teachers and ECEs will be referred to as educators.

[4] In episodes where there were multiple opportunities for self-regulation items to occur, an overall score of "yes" or "no" was determined on the basis of a predominance of positive or negative responses.

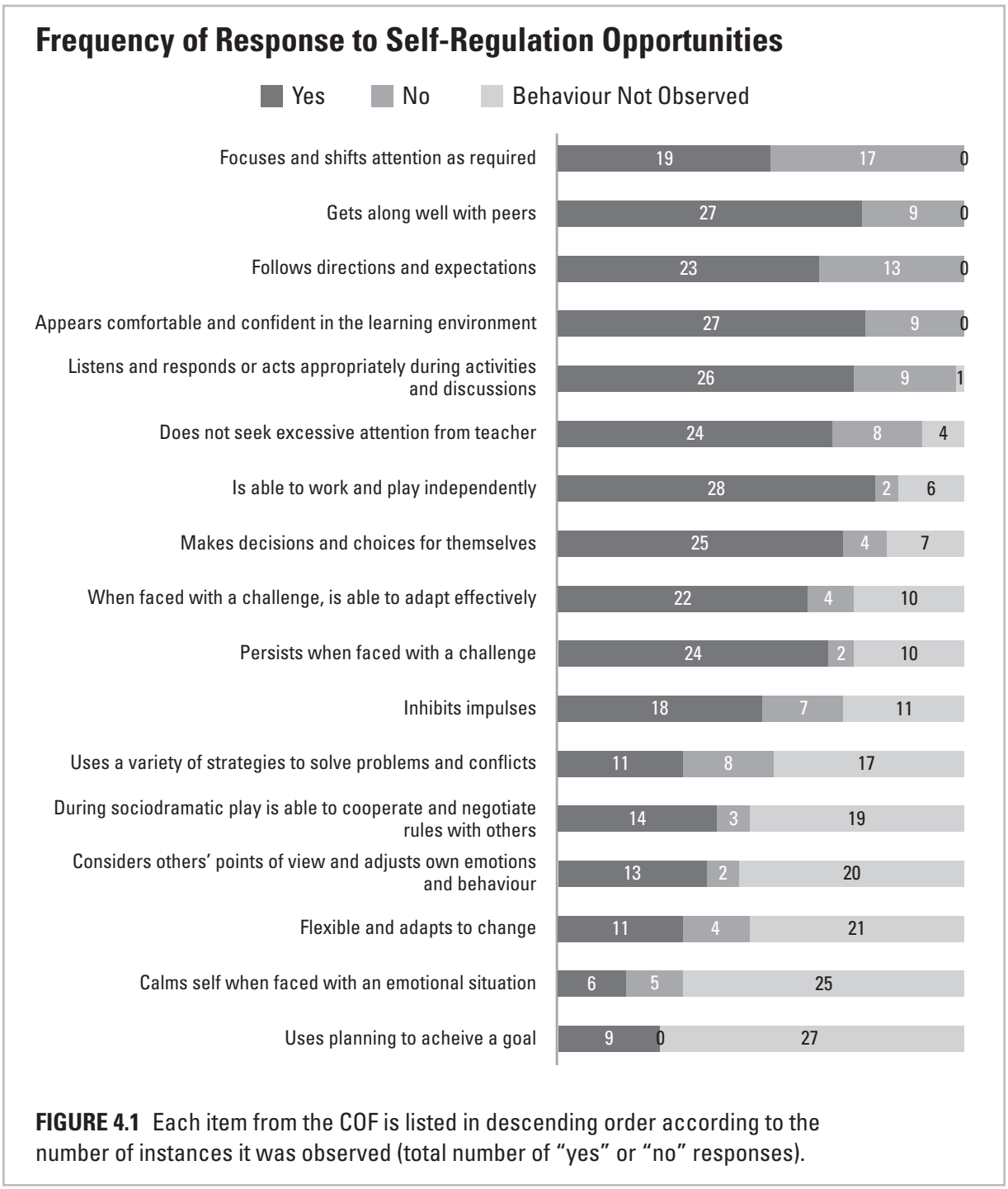

FIGURE 4.1 Each item from the COF is listed in descending order according to the number of instances it was observed (total number of "yes" or "no" responses).

40 minutes of observation, and for whom those opportunities were recorded as "yes" or "no." For some children there was no opportunity to display the item, which was noted as "N/A."

As expected, and as shown in Figure 4.1, some items on the checklist were observed more frequently than others. Items in which all children had the opportunity to exhibit self-regulated behaviour included, *focuses and shifts attention as required, interacts well with peers, follows directions and expectations* and *appears comfortable and confident in the learning environment*.

As Figure 1 also shows, there were five items for which most children did not have the opportunity to display relevant responses, indicated as "N/A": *During socio-dramatic play is able to cooperate and negotiate roles with others, considers others' points of view and adjusts own emotions and behaviour, flexible and adapts to changes, calms self when faced with an emotional situation* and *uses planning to achieve a goal*. Although some of these may reflect limitations of our observational method, the relative rarity of these items is worth noting, particularly for the first item involving negotiation of roles in dramatic play. Given that all observations occurred in play-based environments, and that socio-dramatic play is cited as an ideal context for developing self-regulation, there appeared to be no "steady drip" of this type of behaviour. However, it is possible that the limited instances we did observe could have developmental impact (see the "sisters" role play described later in this chapter).

Figure 1 also shows that the majority of children responded successfully to opportunities for self-regulation. The findings also show considerable variation across items. For example, at the lower end, 53 % of children responded positively in terms of *focuses and shifts attention as required* and 64 % responded positively in terms of *follows directions and expectations*. At the higher end, 75 % *appeared comfortable and confident in the learning environment*. It is worth noting that the behaviour children appeared to struggle with the most, *focuses and shifts attention as required*, was an item that was observed across all children.

As noted above, when presented with an opportunity to demonstrate self-regulation (e.g., being presented with an emotional situation, engaging in social play with peers, being provided with a challenging task or activity, etc.), the majority of children demonstrated the ability to regulate their emotions, cognition and behaviour. This finding was consistent across items, individuals, and sites. At the individual level, 32 out of the 36 individuals observed (89 %) received more "yes" than "no" responses. The mean self-regulation score (percentage of "yes" out of combined "yes and no" responses) for all children was 74 % (Standard deviation of 22.5 %); individual SR scores ranged from 10 % to 100 %. There were also noticeable differences in average SR scores across sites. Means ranged from 59.9 % at the low end to 88.6 % at the high end.

Although differences in mean self-regulation scores across sites are likely caused by a host of interacting factors (e.g., intrapersonal, demographic, other neighbourhood differences, etc.), the potential contributions of early learning environments cannot be ignored. Recent evidence suggests that structured play-based programs can be successful in advancing the development of young children's self-regulation (Bodrova & Leong, 2008; Diamond, 2011; Diamond, Barnett, Thomas, & Munro, 2007). Clearly, however, it is not enough to implement a play-based program and expect children to transform into self-regulated learners. Some characteristics of play-based learning environments are more effective than others at fostering the development of self-regulation. In an attempt to better understand aspects of programs believed to promote self-regulation, the TFD team reviewed field notes and summaries of interviews

with staff from across all sites. Key program features that may be related to self-regulation are described below.

The Role of the Educator(s). To facilitate the development of self-regulation, educators must be aware of individual differences in children's ability to self-regulate. When interviewed, one educator explained the inherent difficulty of this task, noting what one child needs to self-regulate may not be what another child needs to self-regulate. To illustrate this point, she made comparisons of various children in her class and described a broad range of differences in their temperament (e.g., "shy" versus "outgoing"), level of excitement or arousal (e.g., easily "engaged" versus "easily bored"), and cognitive factors (e.g., "high" versus "low" academic performance). She offered the concrete example of how one child in her class constantly needs reminders to "*hold back his excitement*" and "*calm down*" while another child needs encouragement to "*get excited*." What became clear from talking to this educator, and what we subsequently came to recognize in other sites, is the important role of early learning educators as keen observers of children's developmental and self-regulatory needs.

As we observed at one site, the educators were explicitly aware of the degree to which children required assistance entering and maintaining play with their peers. In fact, at the beginning of the school year, the educators at this site met and designed individualized plans to address the social concerns they had identified in several children. In their regular meetings, the team of educators discussed individual progress and next steps for lessening the role of the educator and thus increasing the child's ability to self-regulate. Early in the year, these educators recognized the need to help one boy by teaching him explicit ways of asking peers to join in their play (e.g., "May I please play with you?"). By the end of the year the boy no longer needed help asking peers to play, and with proper adult guidance along the way, had developed play habits that were no longer bothersome to his peers.

As can be seen in the above example, self-regulation is not contained within the "self," but rather develops in a social context, which includes more and less regulated peers or adults (i.e., other-regulation). To help children self-regulate, several early learning educators reported practices they felt were effective:

1. Gradually reducing the amount of adult guidance to help children work independently toward a goal (see example above)

2. Modeling self-regulatory behaviour

An example of the latter occurred while observing one educator lead a small group of children in playing a game of math bingo. Throughout the game, the educator demonstrated examples of self-talk ("*How many do I have? I have one, two, three, four. Four.*"), self-monitoring (e.g., checking and re-checking to determine whether or not she had bingo) and inhibitory control (e.g., demonstrating how to take turns and not shout out). In opportunities such as these,

children are provided with appropriate scaffolding in which to observe and subsequently practice organized thought and behaviour. Nevertheless, the actual number of self-management prompts that children received from individual contact with their teachers was slim (on average, each child received 1.5 self-management prompts during the 40 minutes of observation), so educators cannot rely on their own interactions with individual children as the sole medium for supporting self-regulation. Rather, they have to include program approaches that set up peer opportunities as well, such as those featured in the "Tools of the Mind" curriculum (Bodrova & Leong, 2008).

As seen in Figure 4.2, nearly one third of all of the interactions that children had with their educators involved behaviour management. Behaviour management techniques were separated into self-management prompts, in which the educator scaffolded the children's ability to monitor and manage their own behaviour, and direct management techniques, which involved the educator issuing a direct command for a specific behaviour. In the situation of a child

Types of Interactions Between Children and Educators

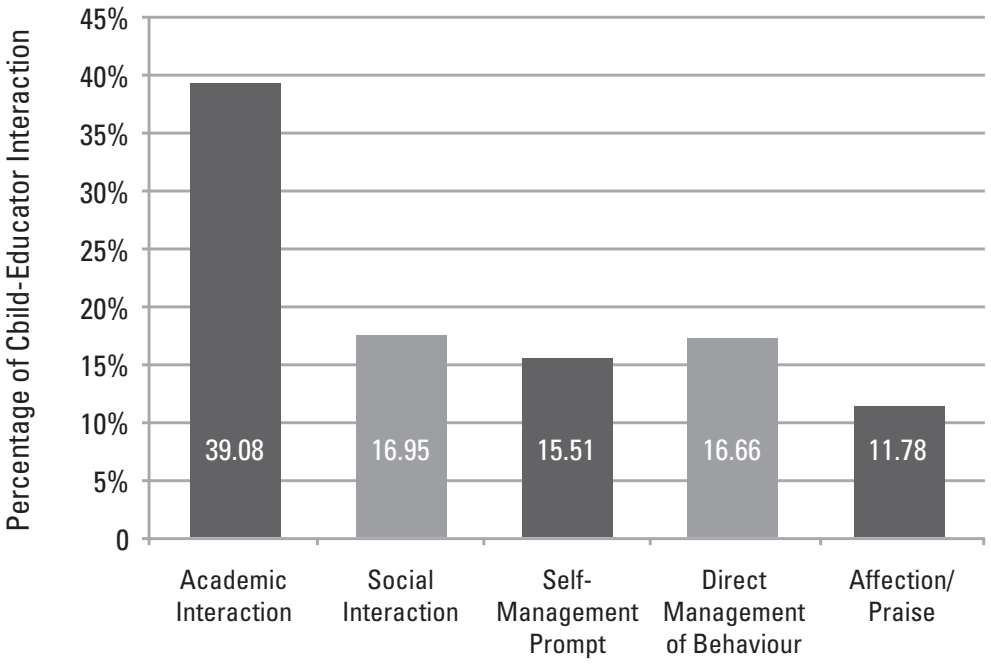

FIGURE 4.2 Interactions between children and educators were coded as being academic, social, self-management prompts (in which educators encouraged children to develop self-regulation), direct management of children's behaviour (i.e., a direct command) or affection/praise. Nearly 40 % of children's interactions with educators were academic in nature. Of the academic interactions observed, 49 % were related to literacy, 23 % art, 20 % math and 8 % science. Nearly a third of child-educator interactions (32.46 %) involved management of children's behaviour. Of this behaviour management, self-management prompts and direct management of behaviour occurred with similar frequency.

playing noisily, for example, a self-management prompt would involve the educator commenting to the child that she could hear his voice from the other side of the classroom (and thus supporting him in recognizing and dealing with the problem). Alternatively, direct management of behaviour would involve the educator explicitly telling the child to lower his voice. Direct behaviour commands occurred approximately as frequently as did self-management prompts. It's possible that in the hustle and bustle inherent in early learning environments, educators find it challenging to manage children's behaviour using self-management prompts, and instead offer direct commands. How ECEs and kindergarten teachers can blend expertise and training in understanding child development and employing play-based learning are considered in the BWELC case study in Chapter 3 of this report.

Time, Space, Materials and People. Early learning educators also support the development of children's self-regulation by effectively managing time, space, materials and people. To illustrate what this might look like, we offer the following description of one of the programs observed:

> The children barely noticed as the researchers entered the room. They were deeply engaged in their own self-selected activities. A boy and a girl with headphones on sat next to each other on a small sofa, periodically breaking their silent concentration to look up at one another and laugh about the audio's content. Nearby, two girls sat quietly next to one another at the art table, both holding pieces of paper close to their faces as they carefully manipulated their scissors' paths. At the carpeted area, a group of children laughed, shouted and jumped up and down as they managed their own game of math bingo. In a private and cozy corner of the carpeted area, a girl was sprawled out and busy assembling a puzzle. A small group of boys at the block area hurriedly moved around in a cooperative effort to construct the "perfect bobsled." While this was happening, the early learning educators—including a student ECE—were observed walking from child to child, group to group, showing an interest in their activities by asking questions, prompting them with new ideas and periodically joining in their play.

Within this classroom, there was little unproductive play behaviour (12.8 % of play episodes were coded as onlooker/unoccupied, while nearly half of the play was dramatic or cooperative), affording many opportunities for children to develop self-regulatory skills. Children were allotted large chunks of *time* to engage in an assortment of activities of their choice. As a result, there were fewer transitions and an increase in sustained attention on a single task. The room was used to its full potential as children were spread out and performed movements as the *space* encouraged. Activities varied and contained an ever-changing selection of *materials*. The educators encouraged children to explore the materials in new ways and used the materials as a starting point for more intentional instruction and learning opportunities (e.g., *How many different ways can those blocks be used to form a square?*). The *educators* roamed the

room separately but appeared to work as a team with awareness of one another's paths and instructional objectives. With effective management of time, space, materials and people, the classroom appeared to be a place in which all its members are happy, playing/learning, moving, socializing and engaged, with mostly successful opportunities for self-regulation.

Nevertheless, there is still healthy and sometimes critical reflection on practice in these classrooms. An example of an area for continued analysis is how "free" choice of activities and emergent themes should be. In providing students with free choice in their selection of activities and play, educators face the issue of certain children self-selecting activities that "play" to their strengths (e.g., building) and not necessarily their weaknesses (e.g., literacy). Concerns with how to deal with this issue were voiced by several early learning educators: "*There are always those children who play at the same centre over and over again*." In discussing ways to resolve this issue, possibilities emerged, as educators discussed various approaches they saw as helpful but not without limitations. For example, one educator explained how she sometimes feels obligated to assign children to different centres, but then feels guilty for taking choice away. This is yet another example of the challenge educators face in striking the appropriate balance between free play and structured or guided play. Indeed, early learning educators must be mindful of how their management of time, space, materials and people afford children opportunities to build on their strengths, but also allow for the development of news skills and strengths.

Level of Engagement

Children's engagement in the classroom depends largely on self-regulation skills (Pagani, Fitzpatrick, & Parent, 2012). In fact, classroom engagement, as defined by Pagani and colleagues (2012), shares many of the defining features of self-regulation, including: adapting to the classroom environment, self-control, persistence, the ability to work well independently and with peers, attentional and emotional regulation and cognitive flexibility. When comparing the key features of classroom engagement listed above with the self-regulation items in the COF (see Figure 4.1), one cannot help but notice the considerable overlap. Perhaps this is not surprising considering that both constructs are multidimensional and attempt to define an aspect of self that underlies the mobilization of goal-directed or motivated behaviours. To be sure, the classroom is a dynamic and complex environment and at times calls for "up-regulation" (e.g., mobilization of energy), while at other times calls for "down-regulation" (e.g., calming oneself). To maintain engagement in such an environment requires top-down control processes (cognitive control) that are intimately linked with the ability to self-regulate. As an overall measure of self-regulation skills and motivation, the TFD researchers examined children's levels of engagement throughout the school day.

To gauge children's level of engagement, researchers used a three-point scale (1 = not engaged, 2 = somewhat engaged, 3 = very engaged) based on degree of attentiveness and concentration, and assigned each child a score immediately

following each observational block: transitions, small group instruction, whole group instruction and play (see Figure 4.3). Overall, children were most engaged during small group instruction, followed by play, transitions and lastly, whole group instruction. In comparing mean self-regulation scores with mean level of engagement scores, sites that ranked higher in self-regulation also tended to rank higher in levels of engagement. At the individual level, children's self-regulation scores were modestly correlated to their level of engagement during small group instruction ($r = .42$, $p < .05$), but interestingly, not during whole group instruction ($r = .22$, n.s.). All children in the study, regardless of whether their self-regulation score was at the low or high end of the spectrum, demonstrated similar levels of engagement during whole group instruction. This is not to say that whole group instruction is inefficient as a means of engaging students and developing self-regulation. What this finding might suggest, however, is the need to reconsider ways in which to raise and sustain children's level of engagement during whole group instruction.

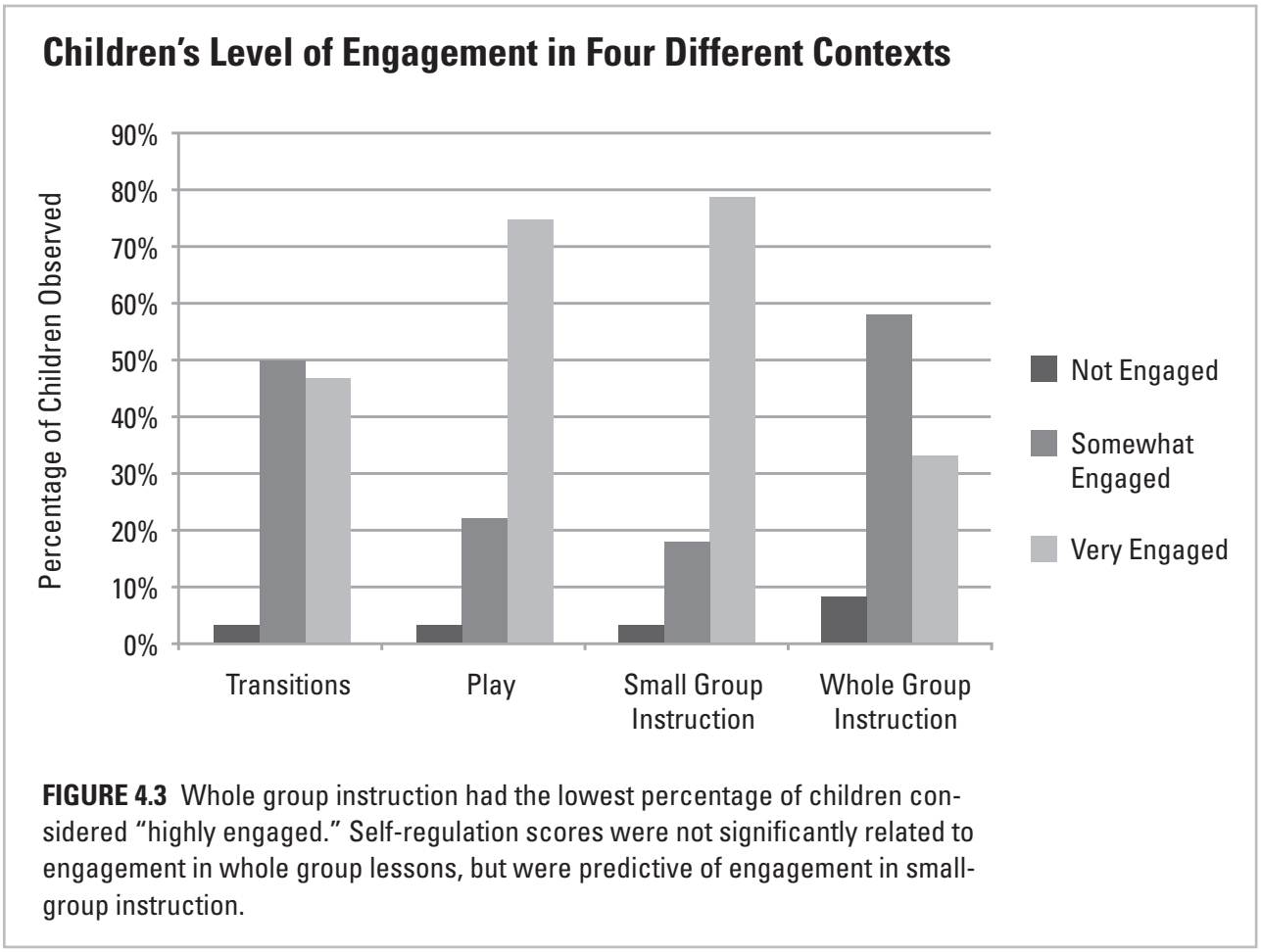

FIGURE 4.3 Whole group instruction had the lowest percentage of children considered "highly engaged." Self-regulation scores were not significantly related to engagement in whole group lessons, but were predictive of engagement in small-group instruction.

Self-Regulation and Social Interactions

Although the term evokes images of egocentrism, *self-regulation* is just as much about others as it is about the self. Self-regulation is learned, practised and put to the test largely in interacting with others. In this study, children's self-regulation

scores (i.e., percentage of "yes" scores on COF items out of total number of "yes" and "no" items) were significantly related to their ratio of successful to unsuccessful play attempts with peers. Children with higher self-regulation scores were more likely to successfully initiate and enter play with peers and less likely to be rejected (the correlation between self-regulation score and success rate in initiations was significant at r =.54, p <.001). In a similar vein, children's self-regulation scores were negatively correlated with the number of negative interactions they experienced with peers. Children's self-regulation scores were significantly correlated with engagement in unoccupied and onlooker behaviour (r = –2.94, p < .05). Although not observed frequently, unoccupied behaviour was much more likely to be seen in children with the lowest scores of self-regulation. Indeed, the mean self-regulation score for children who engaged in unoccupied behaviour (M = 65 %) was significantly lower (t = –2.34, p <.05) than for those who did not demonstrate unoccupied behaviour (M = 78 %).

As seen can be seen in Figure 4.4, the children in these play-based, full-day classrooms appeared to get along well with their peers and demonstrated many positive interactions. Disputes between children were rare, constituting less than 10 % of all child–child interactions. Moreover, the children in this study were highly successful at initiating play with their peers. Both explicit (i.e.,

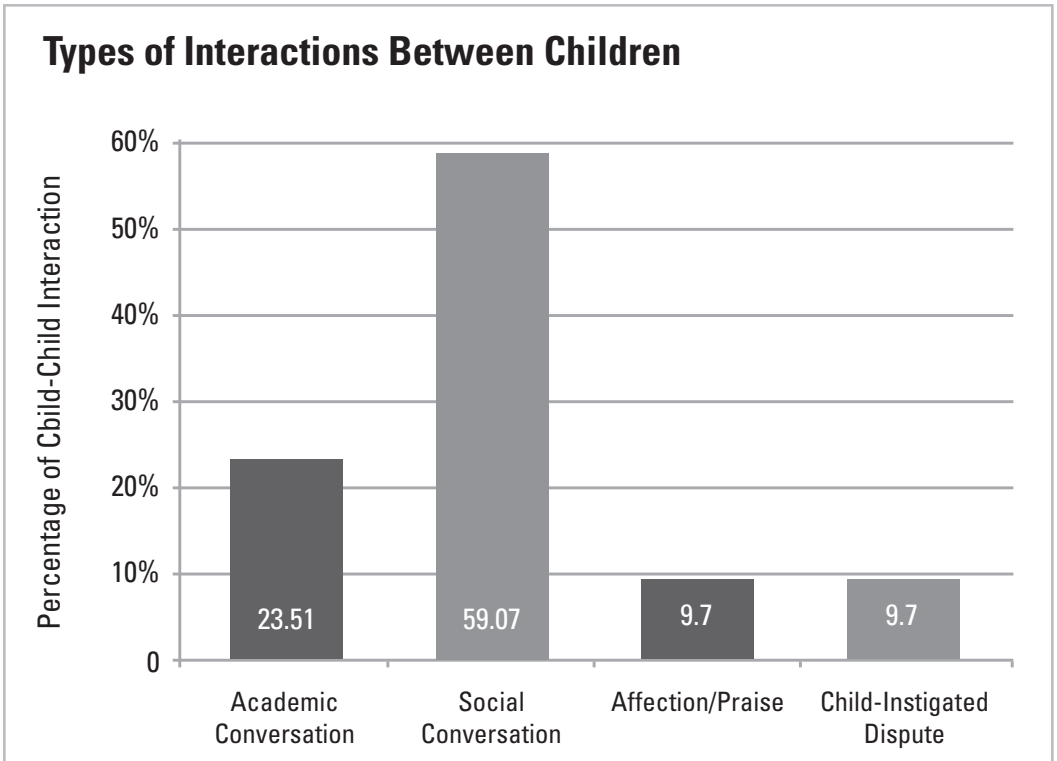

FIGURE 4.4 The majority of children's interactions were social-conversational. Nearly one quarter of all child–child interactions were academic, meaning that children were actively exploring concepts related to literacy, math, science or art. Of these academic interactions, nearly two-thirds were related to literacy (66 %), 14 % were related to mathematics and 20 % were related to art. There were no science-related child–child interactions observed in this study.

directly asking to play with a peer) and implicit initiations (i.e., engaging in a behaviour with a peer that leads to social play) were coded from the running records. Out of all of the initiations made by children in the study, nearly three-quarters (74.8 %) were successful in leading to a social play scenario.

What Does Play Look Like in Full-Day Kindergarten?

Forming a cornerstone of healthy child development, play is also considered to be a vehicle that drives young children's early learning. All full-day classrooms observed in this study use a self-described play-based curriculum; within these classrooms, play took place in many forms, potentially serving a wide variety of developmental needs. We know from previous TFD research that children value play above all other forms of activity in early learning settings (Corter et al., 2007). In the current observations, children were observed to be the most engaged during play and small group instruction (see Figure 4.3).

Types of play observed. Play categories were developed for the Child Observation Framework by adapting the existing literature on types of play. We condensed the categories from Rubin's (2001) Play Observation Scale to create six play categories: socio-dramatic, cooperative, parallel, solitary, onlooker and unoccupied. Table 4.1 provides definitions for each category.

Category	Definition
Socio-dramatic	Child is playing with at least one other child in a manner that involves creating a dramatic situation and enacting roles in this situation, or attributing the roles to another object, such as a doll. Children are pretending to be something else, and their roles complement each other. Solitary dramatic play (e.g., playing in kitchen centre by herself) is not included.
Cooperative	Child is playing with at least one other child in a game or activity that does *not* involve creating a dramatic situation. Examples include playing tag, playing together on a puzzle, working together to build something with blocks, etc.
Parallel	Child is playing in a close proximity to another child (or children), either with the same materials or different ones. Children may interact or converse, but do not actually join their play together.
Solitary	Child is playing alone and is not interacting with peers. All types of solitary play are included in this category (e.g., a child playing alone with dolls, puzzles, going down the slide).
Onlooker	Child is watching another child or other children play, but is not interacting or contributing to the play situation.
Unoccupied	Child is not engaged in any play or other productive behaviour. May be engaged in "functional" behaviour (e.g., tapping pencil versus using pencil as a drum) or other behaviours such as wandering around the room, sitting alone, etc.

TABLE 4.1 Definitions for play categories used in the COF

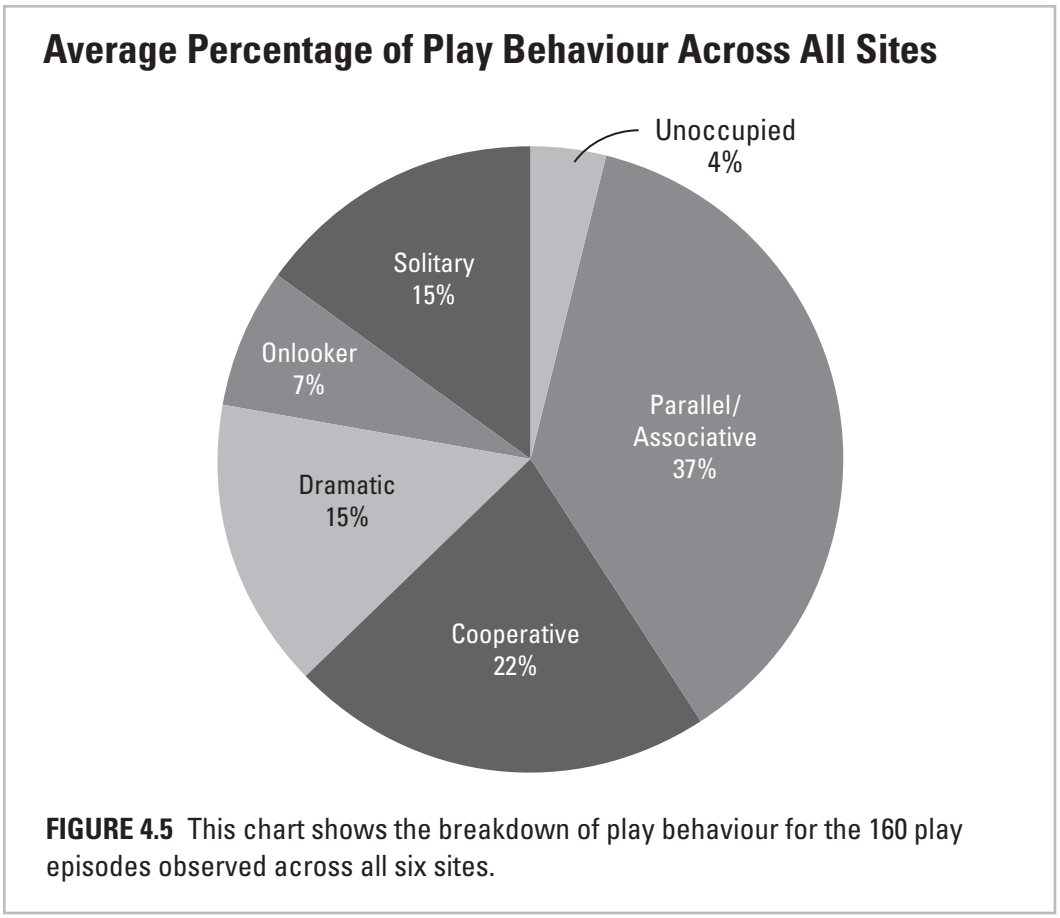

FIGURE 4.5 This chart shows the breakdown of play behaviour for the 160 play episodes observed across all six sites.

Play episodes were coded into one of the six categories, and were then converted into percentages to determine how often these categories were represented in children's play (see Figure 4.5). Children appear to balance the majority of their time between parallel play and social play (i.e., cooperative and socio-dramatic). Indeed, social play and parallel play each comprised 37 % of the play episodes, while solitary play comprised only 15 %. Onlooker and unoccupied behaviour occurred very rarely, together comprising only 11 % of the play episodes.

Types of play behaviour were related to children's self-regulation scores and varied in relatively frequency across the sites. Children with lower self-regulation scores engaged in more unoccupied and onlooker behaviour ($r = -.38$, $p < .05$). A child's percentage of dramatic/cooperative play episodes was not significantly correlated with individual self-regulation scores, indicating that self-regulated children may be engaging in activities other than socio-dramatic or cooperative play that serve to promote self-regulation.

Research suggests that socio-dramatic play is important for promoting positive development, including self-regulation and language (Bodrova & Leong, 2008). However, only 15 % of the episodes observed in this study were coded as socio-dramatic. Nevertheless, we observed opportunities for cognitive growth and self-regulation in other forms of play. For example as Rubin (1982) noted

years ago, solitary play may provide opportunities for learning and development. In the episodes we observed, it is important to note that in some cases of solitary and parallel play, children demonstrated positive self-regulation and prosocial behaviour to maintain the play episode (see text box #1). Thus, it appears that a deeper examination of the types of play behaviour that occur in full-day classrooms and how these behaviours connect to developmental outcomes is needed. It is possible that in the context of a full-day classroom, a balance of different play types might afford the optimal range of development opportunities for children. In addition, children may also have more "space" to self regulate by balancing their time between peer interaction and more individual play depending on their individual needs.

It is important to note that when cooperative or socio-dramatic play occurred, children demonstrated self-regulation and prosocial behaviour to maintain the play episode. Dramatic play may be powerful when it does occur, even though it occurs relatively rarely. For example, while pretending to be teenage sisters, two girls resolved a small dispute regarding who got to "go to school" to maintain their play (see text box#2). In resolving this dispute, the two practised suppression of their immediate desires to achieve their shared goal. Examples of goal-sharing occurred during cooperative peer play, as well.

TEXT BOX #1

Examples of developmental opportunities in non-social play

A 4-year-old girl, Olivia, sits in the puzzle centre of her full-day classroom, quietly selecting activities from the shelf, completing them and returning them where she found them. She responds with a smile when a peer hands her a plastic purple wand, but continues to play independently. When a group of boisterous boys begins engaging in rough-and-tumble play beside her, she picks up the book that she was flipping through and moves a few feet away from them. It's clear that she is focused on her book, and she occasionally can be seen mouthing the words as she is reading them.*

Patreem and another child are playing at the water table. Although the two are both using the containers, tubes and funnels in the water table, they do not interact or speak to each other much. Patreem carefully fills up a small container with water and transfers it to a larger jug without spilling. It takes him several times to fill the large jug in this manner. When he's finished, he pours out the water from the large jug back into the water table. Patreem gets excited when he realizes that he can use the jug to pour water into the corner of the table and watch it flow down the side. He pours a little too quickly, however, and some of the water spills over onto the floor. His peer at the water table watches him as he pours water into the corner, and begins to copy this behaviour. Both boys pour water into their respective corners of the table without much direct interaction.*

In both vignettes, the focal children are playing independently from their peers. Both children, however, demonstrate prosocial behaviour when peers enter their solitary play. Furthermore, while playing independently, these children demonstrate self-regulated behaviour by identifying and carrying out their own personal play goals. Olivia is engrossed in a book and gives herself space when some loud children get too close to her. Patreem appears to be developing concepts of volume and capacity as he experiments with the larger and smaller jugs. Furthermore, although he and his peer borrow ideas from each other for water play, each child maintains his own goal-oriented activities. Overall, both Patreem and Olivia demonstrate that solitary and parallel play offer important opportunities for positive development, especially when alternated with plentiful opportunities for peer interaction.

TEXT BOX #2

Examples of peer-interaction in socio-dramatic play

The pretend play scenario begins with the statement, "Let's act sisters." The two girls being observed begin walking and talking with an attitude that is stereotypical of female adolescents. Pretence is suddenly brought to a halt when one of the girls breaks character to attend to a practical need: "Wait! What is your name? I need to know your sister name." Without giving her playmate enough time to respond, she impatiently solves the problem herself by stating, "Ok well my name is Sarah and your name is Jill. So come on let's go now."

For the next few minutes the girls are observed walking around the classroom. As they approach the drama centre they stop alongside a table. Sarah looks to Jill, and asks her "What do you want to get?" Jill promptly replies, "I'm going to get a sandwich and a vanilla latte." After a few seconds of waiting for their food to be served, they reach across the table and pick up their imaginary food. The two girls look up and smile at the "person" who handed them their food. One after another they say "Thank you," before turning their backs and entering the drama centre.

Once in the drama centre their make-believe play becomes a little more dramatic. Sarah turns to look at Jill and says "I'm going to school now," and Jill replies, "Me too."

"But I am 16 and you're not."

"Yes I am 16 too."

"No you are 14 and I am 16 so you stay here and I go to school."

"But I want to go to school too."

"Fine, forget it. We both won't go to school."

The two girls stop talking and for several seconds do not look at each other or engage in conversation. Their facial expressions and body language indicate that they are upset. After some time of staring down toward a pile of drama props, Sarah reaches for a suitcase, picks it up and begins looking inside. She returns her attention to Jill and says, "I'm going to pack my suitcase. Hmmm. What do I need?" This gesture is all that is required to break the silence as the two girls return to playing the roles of teenage sisters.

This observation shows some of the opportunities that dramatic play affords for the development of self-regulation in terms of executive functions, such as working memory and flexibility (Bedrova & Leong, 2008). The girls need to maintain the memory around their assigned/negotiated roles. Sarah needs to flexibly adapt her proposal for the role of being the older sister and going to school. At the same time, these self-regulation skills flow into social regulation and social skills or character development, as they may be called in classrooms at higher-grade levels in the education system (Ontario Ministry of Education, 2008).

TEXT BOX #3

The educators' role in scaffolding children's play

A group of four boys is playing in the block area, with the educator observing nearby. Each boy has a large block in hand and they take turns pretending to use the blocks as bobsleds. They slide their block, or "bobsled," on the carpeted floor and pretend to race down the track. After several complaints that one of the boys is not racing on the proper imaginary track, they begin to discuss ways to build one. They quickly decide where to build it, but struggle with the issue of how to build it. The ECE approaches and prompts them with the question, "What can we put on the carpet that would stick to it?" A boy shouts out, "Tape!" A few minutes later, with the help of the ECE, the boys have designed a race track by placing two long pieces of masking tape parallel to one another along the surface of the carpet. The ECE is observed exiting the play scenario and approaching another small group of children. The boys take turns racing their bobsleds down the track, but are soon confronted with another issue of how to best determine the winner. Again, the ECE senses that this is an appropriate time to facilitate and approaches the boys. She asks them, "How do they know who wins the bobsled races in the Olympics?" The boys stop to think about this for a moment before one of the boys enthusiastically responds, "Oh about the time. They time it." For the next half-hour, without further prompting from the ECE, the boys take turns racing their bobsleds down their custom-designed track, counting aloud each other's race times and recording them on a nearby whiteboard.

By carefully observing the play behaviours of this group of boys, the ECE was able to offer a few prompts that helped the boys enrich and extend their play experience, providing them with opportunities to explore concepts related to mathematics (e.g., through measurement of time) and literacy (e.g., through recording their scores on the whiteboard). The ECE made herself available to the boys during periods of struggle, but when it was clear that the boys were capable of playing independently she was quick to exit the play scenario and make herself available to other children in other play areas.

The example in text box #3 helps to illustrate an important finding regarding the nature and quality of children's play, and furthermore, what educators can do to extend children's informal understandings. In keeping with the example of children's block play, consider how various types of play with blocks might afford different learning opportunities. Research shows that during unstructured or free block play, children demonstrate mathematical understandings of spatial relationships and the physical properties of objects (Kamii, Miyakawa, & Kato, 2004), concepts that have been shown to predict later school achievement in mathematics (Wolfgang, Stannard, & Jones, 2001). In short, free play with blocks encourages children to think mathematically. However, the opportunities for learning do not end here. There is an emerging consensus that "play alone does not guarantee mathematical learning will take place" and that although children do learn from play, "they can learn much more with artful guidance and challenging activities provided by their teachers" (Seo & Ginsburg, 2004, p. 103). In a study by Casey and colleagues (2008), structured play with blocks was found to be superior to free play with blocks in facilitating children's spatial reasoning abilities. Features of this description also can be seen in the example in text box #3, in which the educator artfully introduced the boys to new ideas and directions that they were then able to incorporate into their own independent play. Without this skillful intervention, it is easy to imagine how the boys' rich social, imaginative and mathematical play might have ceased to exist.

Overall, the findings from the play observation component of the Child Observation Framework indicate that play indeed drives learning and development in full-day classrooms. When playing, children are highly engaged and demonstrate self-regulation, positive peer interactions and cognitive development. Moreover, when children are playing, the majority of their episodes are productive in that there are very few episodes of onlooker or unoccupied behaviour (see Figure 4.5). Finally, children tend to be quite successful in their bids for social play amongst peers. Taken together, these findings suggest that full-day classrooms can be positive environments for children to engage in the very serious business of play.

Conclusions and Future Directions

KEY FINDINGS

Children in full-day kindergarten are generally able to self-regulate, but with appropriate levels of challenge; variations are found across children, sites and type of classroom activity.

- Children tend to respond positively in situations requiring self-regulation. The overall average for children was 75 % of positive responses, indicating general success but with room for development.
- At the same time there are large individual differences in percentages of successful negotiation ranging from 10 % to 100 %, as would be expected in classes with a two-year age range.
- There was also variation across classroom samples; site averages for children's self-regulation scores ranged from 60 % to 89 %.
- The self-regulation item on the COF with which the most children had difficulty was *Focuses and Shifts Attention as Required*, with just over half of the children (53 %) assigned a "yes" for this item.
- Children exhibited the highest levels of engagement in play and small-group instruction and lower engagement in whole group lessons. While children's self-regulation scores were positively correlated with engagement in small-group settings, there was no relationship between self-regulation and engagement in whole group lessons.

Educators play an important role in developing self-regulation.

- Educators reported intentionally adapting their practice to help children regulate their behaviour, thoughts, emotions and social interactions.
- Educators appear to use self-management prompts as frequently as they use direct behaviour commands; one-third of all interactions between children and their teachers were coded as behaviour management.
- Although educators set the stage, the time that they directly interact with each individual child is limited, suggesting that how they set the stage for peer interactions is crucial and that the development of self-regulation will depend on both adults and peers.

Children in full-day kindergarten tend to have positive interactions with their peers and engage in productive play behaviour.

- Overall, the majority of children's peer interactions were positive with relatively few disputes. Children were successful in initiating play with their peers. Those with higher self-regulation scores were more likely to successfully initiate and enter play with peers and were less likely to be rejected.
- Unoccupied behaviour occurred very rarely, but was more likely to be seen among children with low self-regulation scores.

- Children appear to balance their time between social play (socio-dramatic and cooperative) and non-social play (parallel and solitary).
- Socio-dramatic play occurred relatively infrequently (15 % of play episodes) and opportunities for self-regulation occurred in other types of play.

Implications and Future Directions

- While the majority of children appeared to consistently self-regulate, approximately one-tenth of the children in the study responded with self-regulating behaviour to fewer than half the opportunities. Future research should look at the impact of early interventions on children who struggle with self-regulation, or to rearranging the demands for some children to increase opportunities for success.
- Given the lower levels of engagement in whole-group instruction, educators can look for ways to better engage students during whole-group activities (e.g., by reducing time spent on more mechanical aspects such as taking attendance etc.), and can consider employing more small-group activities when providing instruction.
- One method through which educators may promote self-regulation is by using self-management prompts rather than direct behaviour commands when managing children's behaviour. Given the relative lack of self-management prompts observed, however, educators may need to make a more conscious effort to use mindful talk and provide behaviour management instructions that better scaffold children's developing self-regulation.
- More research is needed on exploring the link between types of play and outcomes for children's self-regulation. Specifically, given the relatively low levels of socio-dramatic play observed in this sample, more research is needed on how children develop self-regulation through other types of play and activity. Additionally, future work is needed to address how early learning-kindergarten classrooms can promote more social-dramatic play.

References

Baroody, A., Lai, M., & Mix, K. (2006). The development of young children's early number and operation sense and its implications for early childhood education. In B. Spodek & O. Saracho (Eds.), *Handbook of research on the education of young children* (2nd ed.). Mahwah, NJ: Erlbaum. 187-221.

Baumeister, R.F., & Vohs, K.D. (2011). *Handbook of self-regulation: Research, theory, and applications* (2nd ed.). New York: Guilford Press.

Best Start Expert Panel on Early Learning. (2007). *Early Learning for Every Child Today*. Ontario Ministry of Children and Youth Services. Available at http://www.children.gov.on.ca/htdocs/english/topics/earlychildhood/early_learning_for_every_child_today.aspx.

Bodrova, E., & Leong, D. J. (2008). Developing self-regulation in kindergarten: Can we keep all the crickets in a basket? *Young Children, 63*(2), 56-58.

Casey, B.M., Andrews, N., Schindler, H., Kersh, J.E., Samper, A., & Copley, J. (2008). The development of spatial skills through interventions involving block building activities. *Cognition and Instruction, 26*, 269-309.

Clements, D.H., & Sarama, J. (2007). *Building blocks – SRA real math, Grade PreK*. Columbus, OH: SRA/McGraw-Hill.

Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., et al. (2007). *Toronto First Duty Phase 1 Final Report: Evidence-based Understanding of Integrated Foundations for Early Childhood*. Retrieved September 28, 2010, from http://www.toronto.ca/firstduty/tfd_phase1_finalreport.pdf.

Diamond, A., Barnett, W.S., Thomas, J., & Munro, S. (2007). Preschool program improves cognitive control. *Science, 318*, 1387-1388.

Diamond, A., & Lee, K. (2011). Interventions shown to aid executive function development in children 4 to 12 years old. *Science, 333*, 959-964.

Duckworth, A.L. (2011). The significance of self-control. *Proceedings of the National Academy of the National Academy of Sciences, 108*(7), 2639-2640.

Elias, C.L., & Berk, L.E. (2002). Self-regulation in young children: Is there a role for sociodramatic play? *Early Childhood Research Quarterly, 17*(2), 216-238.

Government of Ontario. (2007). *With Our Best Future in Mind, Every Child, Every Opportunity: Curriculum and Pedagogy for the Early Learning Program* (ECEO). Available at: http://www.ontario.ca/en/initiatives/early_learning/ONT06_023399.

Janus, M., & Offord, D. (2007). Psychometric properties of the Early Development Instrument (EDI): A teacher-completed measure of children's readiness to learn at school entry. *Canadian Journal of Behavioural Science, 39*, 1-22.

Kamii, C., Miyakawa, Y., & Kato, Y. (2004). The development of logico-mathematical knowledge in a block-building activity at ages 1-4. *Journal of Research in Childhood Education, 19*, 44-57.

McCain, M.N., Mustard, J.F., & McCuaig, K. (2011). *Early Years Study 3: Making decisions, taking action*. Toronto: Margaret & Wallace McCain Family Foundation.

Mischel W., Ozlem, A., Berman, M.G., Casey, B.J., Gotlib, I.H., Jonides, J., Kross, E., Teslovich, T., Wilson, N.L., Zayas, V., & Shoda, Y. (2011) 'Willpower' over the life span: Decomposing self-regulation. *Social Cognition and Affective Neuroscience, 6*(2), 252-256.

Moffitt, T.E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R.J., Harrington, H., Houts, R., Poulton, R., Roberts, B.W., Ross, S., Sears, M.R., Thomson, W.M., & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences, 108*, 2693-2698.

Ontario Ministry of Education. (2008). *Finding common ground: Character development in Ontario Schools K-12*. Toronto, ON: OME.

Pagani, L.S., Fitzpatrick, C., & Parent, S. (2012). Relating kindergarten attention to subsequent developmental pathways of classroom engagement in elementary school. *Journal of Abnormal Child Psychology*, (published online ahead of print).

Pelletier, J., Power, R., & Park, N. (1993). Research on excellence. In C. Corter and N. Park (Eds.), *What makes exemplary kindergarten programs effective?* Toronto, ON: Ontario Ministry of Education and Training.

Roskos, K., & Neuman, S. (1993). Descriptive observations of adults' facilitation of literacy in young children's play. *Early Childhood Research Quarterly, 8*(1), 77-97.

Rubin, K., Coplan, R., Fox, N. & Calkins, S. (1995). Emotionality, emotion regulation and preschoolers' social adaptation. *Development and Psychopathology, 7*(1), 49-62.

Seo, K-H., & Ginsburg, H.P. (2004). What is developmentally appropriate in early childhood mathematics education? Lessons from new research. In D.H. Clements, J. Sarama, & A-M. DiBiase (Eds.), *Engaging young children in mathematics: Standards for early childhood mathematics education* (pp. 91-104). Hillsdale, NJ: Erlbaum.

Shanker, S. (2011, October). *The development of self-regulation*. Presentation at Collaborative Practice in Action. Toronto, ON

Shanker, S. (2010). Self-regulation: Calm, alert, and learning. *Education Canada, 50*(3), 4-7.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B., (Eds.) (2010). *Early childhood matters: Evidence from the Effective Pre-school and Primary Education Project*. London: Routledge.

Wolfgang, C.H., Stannard, L.L., & Jones, I. (2001). Block play performance among preschoolers as a predictor of later school achievement in mathematics. *Journal of Research in Childhood Education, 15*, 173-180.

5

Beyond School-Based Hubs in Toronto Best Start: Observations of Community Service Clusters and Collaborative Approaches for Young Children and Families

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Overview

The general goal of this study was to look at how different services in three Toronto communities work together in clusters or networks, as distinct from integrated work through well-defined hubs as in the case of Toronto First Duty sites. The research was meant to add to understanding of local collaborative partnerships as background for the movement to integrate more service in the early years. At the provincial level, this movement has been advocated over the last decade through Ontario's Best Start with extensions into future planning of Child and Family Centres (CFCs) as envisioned in the Pascal report (2009). This study was carried out as a partnership between the City of Toronto Children's Services division and the Toronto First Duty team, partly to provide context for Toronto's Best Start planning as it relates to CFCs. It also had the general aim of providing a different perspective on service integration to complement the school-based hub model in TFD.

Background

The specific aims of the study were both descriptive and conceptual. We set out to describe behaviours, activities and attitudes that promote *collaboration* or *integration* among services and with families, and the potential of more integrated approaches to improve the lives of children and families. These descriptions were based on interviews with key informants from different service sectors including schools, child care and family support programs.

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At a conceptual level, we hoped to clarify the meaning of collaboration/integration as practiced in the communities we studied and to relate it to the social ecology of the differing neighbourhoods. Terms such as "communication, cooperation, collaboration and integration" are sometimes used interchangeably, but can also be seen on a continuum. Integration generally implies a more advanced and formalized approach to working together. "Service partnerships" is another broad term that implies more than "communication." Given the diversity of terminology, conceptual clarity is important as services seek to improve the ways they work together.

As a way to measure program capacity on a continuum of integration, TFD (2006) developed the Indicators of Change, a measurement tool to support movement toward full integration. Even with the fairly detailed TFD definition of integration in the school hub model along five dimensions (staff, programming, access, governance and parent-community engagement), there was initial confusion around how to implement and increase integration as TFD sites got off the ground. The Indicators tool and the clarity it gave to conceptual integration (see Colley, 2006) was one of the most positively received supports to sites in implementing integrated work in the development of the integrated hub model across the five sites in TFD Phase 1.

Conceptual Integration means arranging time for practitioners and community members to understand, develop and maintain integration (Corter & Peters, 2011). Findings from TFD showed that the process of using the Indicators helped staff and management at the sites to reach a shared understanding of integration and how it was working. A simplified version of this tool has been developed to gauge integration in the Ontario-wide roll-out of Full-Day Early Learning Kindergartens with a focus on benchmarks for integrated staff teamwork, programming and parent engagement (see Appendix 2 in this report).

An inherent challenge in understanding integration, both practically and conceptually, is its complexity. Integration can take place at different *levels*, from service delivery in the community—the focus of this study—to higher levels of system integration, across large-scale service delivery organizations, levels of government and different ministries. Integration also takes different forms at the community level, such as hubs, centres, networks and service navigation/referral models. Informal networks are common in community-based coordination of services for children and families (Siraj-Blatchford & Siraj-Blatchford, 2009). In the present study, it was not clear at the outset how services might be connected in the three communities, so we adopted the term service *clusters* to denote that multiple services were available. Although each community had an Ontario Early Years Centre, they were not grand organizers of services across other agencies.

> There is some way to go before practitioners and stakeholders develop a clear understanding of integrated services. The evidence suggests that the current guidance and terminology associated with integrated service provision need greater clarity (*Report on UK service integration from Siraj-Blatchford & Siraj-Blatchford, 2009*).

Community Case Studies

The descriptive work we intended to do was to clarify how services are pursuing integration goals and how working together was seen to improve service for young children and families. We employed a case study methodology and carried out semi-structured key informant interviews. Twenty-four interviews were carried out across three communities with service leaders in child care, family support, multi-service agencies, Ontario Early Years Centres (OEYCs) and schools.

The communities were chosen on the basis of several criteria. Each community served children who came from low-income families, many of whom were recent immigrants; and each had an OEYC and multiple services clustered in the community in sufficient numbers to provide the potential for collaboration.

At the same time, there were important differences in community ecologies. One neighbourhood included more middle-class families; one was a priority neighbourhood as defined by the United Way; and the third had a public school with Model Schools support determined by the TDSB Learning Opportunity Index. In the first neighbourhood there is lower population density, the schools are smaller and transportation is generally needed to access services, whereas in the other higher-density neighbourhoods families are often able to walk to the services. Furthermore the communities had different histories of service work that were reported to contribute to current levels of working together. In the first community, the OEYC had been established in a way that appeared to concentrate services in that centre, whereas service leadership for collaboration was more widely distributed in the other two communities with higher levels of collaboration. Nevertheless, existing collaborations were valued in all three communities and more collaboration in the future was seen as desirable. Cross-site analysis of the key informant interviews revealed additional common themes that emerged despite the differences in community ecologies and current levels of collaboration. The results presented below reveal some of these patterns. Within each community, key informants were sampled from leaders in categories of child care, family supports, multiple service organizations including OEYCs and schools.

Findings

All informants reported that their organization had working relationships with other services, with the number ranging from 3 to 18. What constituted "working together" varied in the reports. For example, in terms of number of contacts, the range was from yearly, to every week, or even daily in a few cases.

In descriptions of the nature of important partnerships, a number of dimensions were named by at least a quarter of the informants. These included information sharing, community/client needs, frequent contact and close relationships. Shared space or funding were also common bonds. Other kinds of sharing were rarely mentioned (sharing power, goals, history, learning and

staffing). Figure 5.1 shows the number of informants mentioning these categories out of the sample of 24.

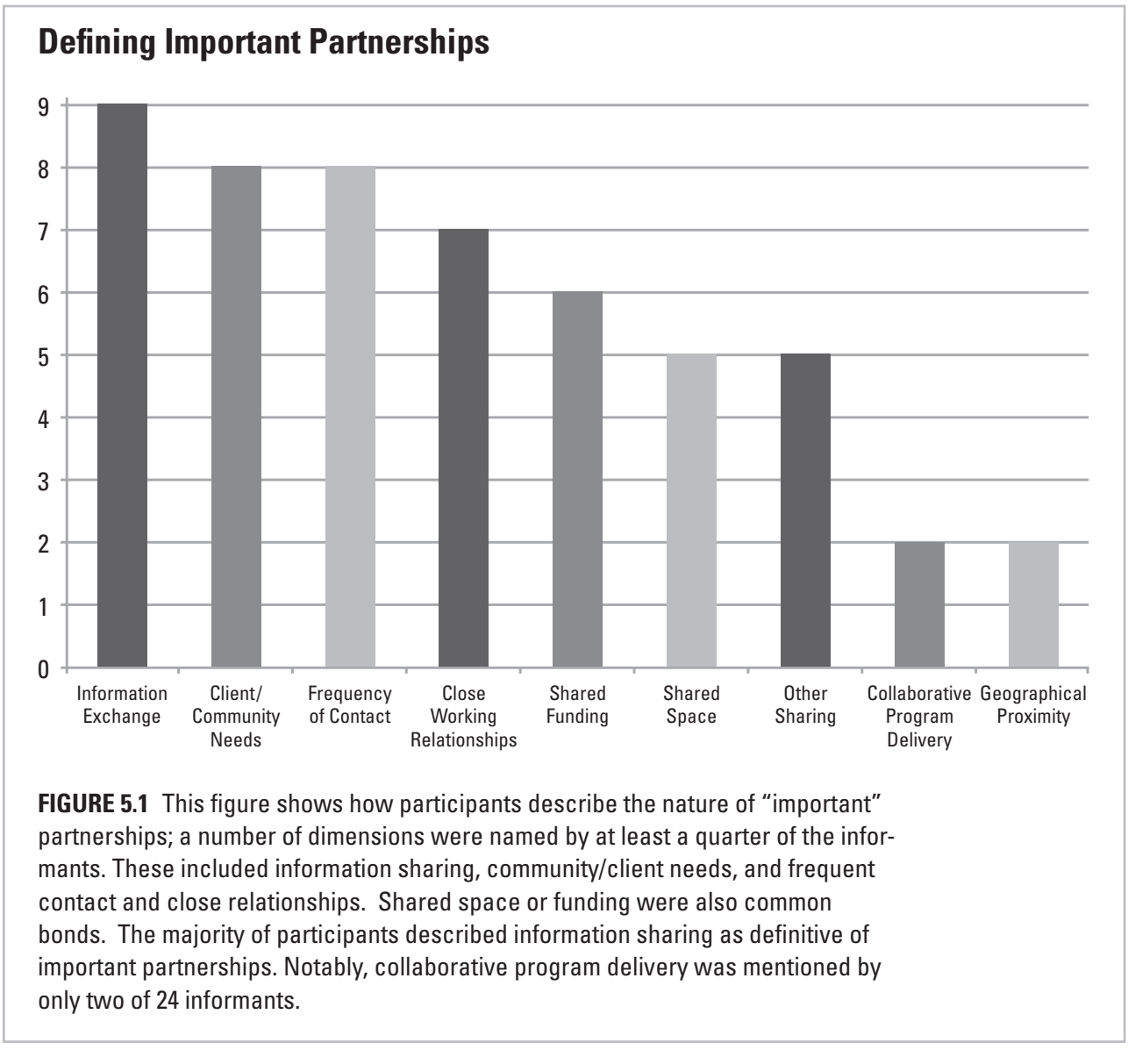


FIGURE 5.1 This figure shows how participants describe the nature of "important" partnerships; a number of dimensions were named by at least a quarter of the informants. These included information sharing, community/client needs, and frequent contact and close relationships. Shared space or funding were also common bonds. The majority of participants described information sharing as definitive of important partnerships. Notably, collaborative program delivery was mentioned by only two of 24 informants.

We also asked about the impetus for developing partnerships. The most common reason was to enhance capacity to meet changing community needs. Other reasons included collaboration initiatives and a history of working together. For example:

> With every change you recognize a new partnership. A partnership may not last for life. It may just be to address a certain need and once that need is addressed, your partnership may change.

A series of questions explored benefits of developing partnerships for the organization, for children and parents and for the community in general.

Benefits for the Organization

Commonly cited benefits for developing partnerships clustered around several different kinds of benefits for staff and easier referrals. Staff benefits included building capacity for working with other services and information exchange, as well as opportunities for joint professional development. Together the various types of staff benefits represented about 40 % of all types of organizational benefits mentioned.[2] Making referrals easier was the next highest subcategory at 12 % of all benefits mentioned for the organization. General organizational benefits also mentioned by a few informants included easier access to information and more access to funding. Other benefits, such as shared outreach to families and collaborative programming, were mentioned by only one or two informants.

Benefits for Children and Families

The major benefit to developing partnerships cited for children and families clustered around improved referrals and smoother access to services (see Figure 5.2). In fact, more than half of the cited benefits (51 %) fell into a referral/access subcategory. Direct benefits for parenting were less common at 32 %, including parent engagement with services and other benefits for social networking and empowerment. Direct benefits for children at 16 % were less common still; these included more learning opportunities and more consistency in routines. The benefit of joint programming to meet individual child needs was mentioned by a single informant, although referral to specialized services was mentioned by six informants. For example:

> Because I have working relationships with community agencies, I can tell parents who they will connect with if they need to access services at a particular agency. You can reassure them that they don't need to be afraid.

Interestingly, one informant suggested that service collaboration contributed to better access for parents through the networking of parents themselves:

> It was of great importance for us to demonstrate to parents that we are willing to work together. Parents then would do outreach for us, spreading the word about a program in the community, which would result in other parents joining our programs.

Benefits for the Community

The major benefit of cluster service partnerships was seen as being enhanced community cohesiveness/sense of belonging. This subcategory represented

[2] Because the interviews were open-ended, informants could cite multiple benefits. For example, the 24 informants mentioned 41 benefits for the organization. Thus, percentage of total benefits mentioned is used as one metric of the importance of subcategories, along with the total number of informants mentioning a subcategory.

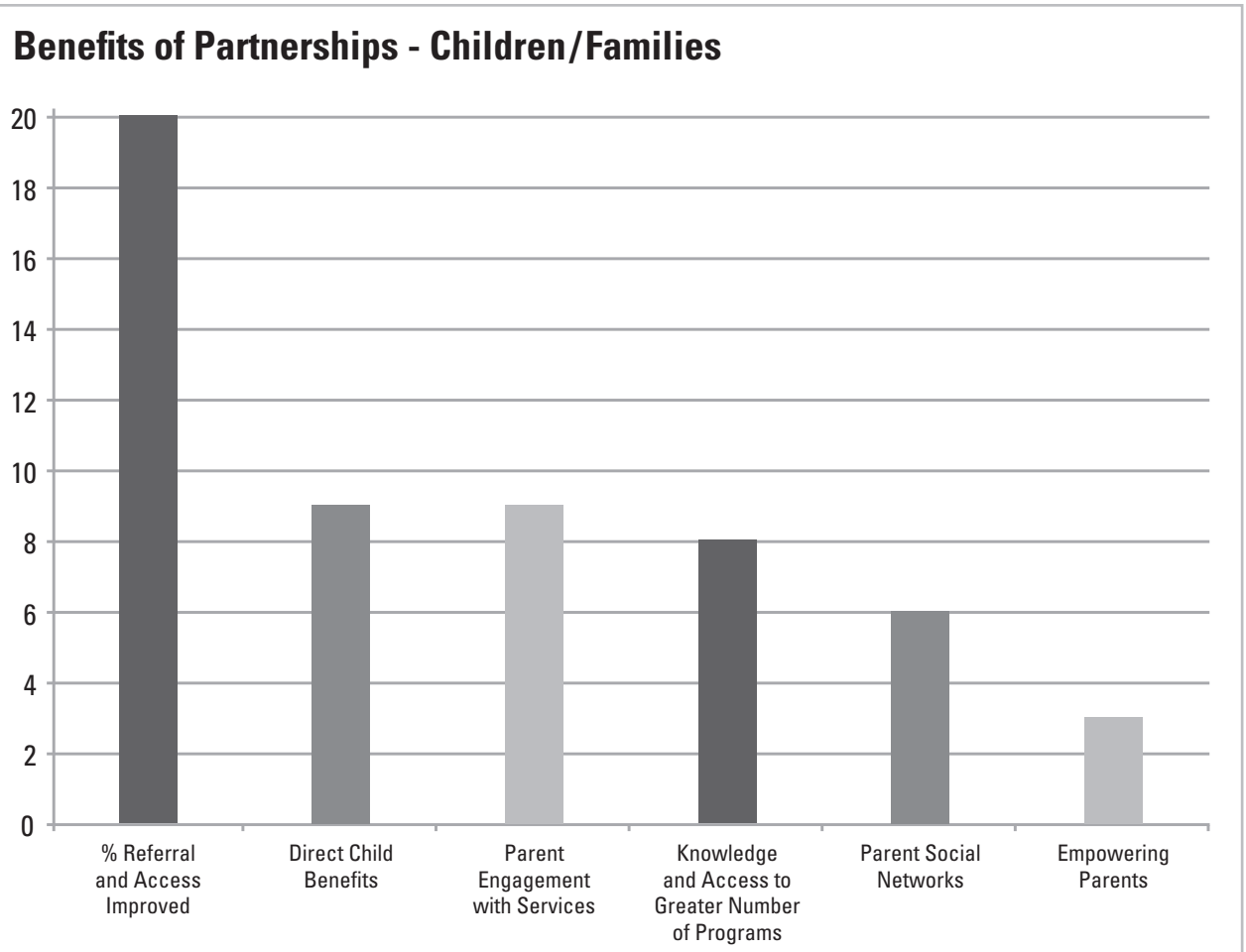


FIGURE 5.2 Key informants cited a number of benefits of partnerships for children and families. Improved referrals and smoother access to services was the most common benefit.

58 % of the cited benefits. Additional benefits included strengthening the community capacity to respond to community needs (13 % of cited benefits) and social support networks for families (11 % of cited benefits). As one key informant said:

> It's giving people a sense of belonging and purpose. And I think it strengthens what a community is and how people respond in an area or community, if people are committed or feel a sense of commitment from partners.

Indicators of Benefits

Much of the reporting on the benefits to developing partnerships was based on anecdotal reports in the community or hearing from families personally (49 % of cited indicators). Some informants reported using client satisfaction surveys, participation levels and community level EDI (Early Development Instrument)

reports. Percentages of cited indicators were 19 % for client surveys, 14 % for participation and 11 % for EDI. Overall, these results show that just as there is no overall unifying platform for collaboration in the communities, there is no unifying approach to assessing how collaboration is working.

Overcoming Challenges and Supporting Collaboration

The familiar refrains of funding, leadership, time to meet and space were frequently mentioned as both challenges and supports to sustaining and deepening collaboration (69 % of cited challenges and supports). Organizational mandates were also seen as crucial to improved collaboration (10 % of cited challenges and supports).

Discussion and Conclusions

The descriptive findings from this study show that early childhood service leaders value working with other services and organizations. In the diverse communities we sampled, working together is seen as important in meeting child and family needs since individual services "can't do it alone" and communities are constantly changing. Every key informant reported that their organization had service organization partners in the community and that these partnerships had a variety of benefits. The direct benefits of developing partnerships for children and families were mainly seen in terms of improved referrals and access. Other benefits for parenting were noted, including improved parent engagement with services. The service organizations themselves were reported to benefit in a number of ways, including making the referral process to other services easier. Direct benefits to staff of developing partnerships were the most common form of organizational benefit, including opportunities for joint professional development and learning to work with other professions. Beyond the direct benefits for children, families and service organizations, many of the informants believe that community cohesion improves when services work together, with ripple effects out through parent networks fostered by collaborative approaches.

Despite this positive picture, there are also cautions in the findings. It should be noted that the variety of suggested benefits for existing partnerships could be viewed as a weakness as well as a strength if it means there is no consensus on the central aims of collaboration. Furthermore, there are limits to what working together means in the current service context, where system support, funding and space for collaboration are limiting factors. Communication and information sharing are common partnership activities, and may enhance referrals or directing parents to other services, but joining up programming appears to be rare. In addition, systematic tracking of referrals and monitoring of the benefits of working together are not happening. For example, although access to services may be improved through working together, there is no systematic tracking of outreach for preschool services. Organizational mandates for working together are missing, so history, good will and relationships keep the collaboration going here and there.

Community ecologies can also enhance or limit the ease with which services work with each other and with families. For example, when families can walk to services and services are close to each other, joining up can happen more naturally. Also, when services have a history of working together in a respectful way, it maintains momentum for working together.

Overall, the findings in this study replicate the goodwill and readiness to collaborate found in the Toronto Best Start (2007) survey to assess the level of collaboration among the three core early years streams: child care, kindergarten and family supports. Nevertheless, overall levels of collaboration are low in both the 2007 survey and in the informants' reports in this study. In the earlier survey, 77 % of the respondents scored at the co-existence level, 16 % at the coordination level and only 7 % scored at the highest level-collaboration or integration. In the current interviews, most reports of working together reflected communication and coordination more than higher levels of collaboration and integration such as joint programming. Communication sometimes simply meant learning about other kinds of child and family services in the community. Coordination sometimes meant referrals that were informal suggestions to parents about accessing additional services, which may or may not be related to special needs.

The current study also documents that there is room to develop conceptual clarity on what working together means, why it is worth doing and how to benchmark levels of collaboration and systematically assess its benefits. Recognizing this, both the City of Toronto Children's Services Division (2011) and the Ontario Ministry of Children and Youth Services (2011) have recently developed documents to help clarify what collaboration or integration might look like in Best Start Child and Family Centres, how to develop it and how to benchmark it.

The research literature suggests clarity on the aims of integration are crucial both in terms of how integration can improve the quality of programs and how integration and quality can improve particular outcomes for children and families (Siraj-Blatchford & Siraj-Blatchford, 2009). However, as noted before, the findings in this study gave little or no indication of programs changing or improving as a result of working together. Nor was there unanimity on a few key benefits for children and families. Another suggestion from the research literature is that informal community networks and referral or service navigation models of integration are less effective than distributed community centres that can provide a platform for more advanced forms of collaboration and integration (see Corter & Peters, 2011; Melhuish, Belsky & Barnes, 2011; St Pierre, Layzer, Goodson, & Bernstein, 1999).

References

City of Toronto Children's Services. (2011). *Child and Family Service System Continuum*. Draft discussion document, August.

Colley, S. (2006). *How can integrated services for kindergarten-aged children be achieved?* Toronto, ON: Integration Network Project, Institute of Child Study, University of Toronto. Available at: http://www.oise.utoronto.ca/ics/UserFiles/File/Integration Colley06.pdf.

Corter, C. & Peters, R. (2011). Integrated early childhood services in Canada: Evidence from the Better Beginnings, Better Futures (BBBF) and Toronto First Duty (TFD) projects. In R. E. Tremblay, R. G. Barr, R. DeV. Peters, & M. Boivin (Eds.), *Encyclopedia on Early Childhood Development* [Online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2011:1-8. Available at: http://www.child-encyclopedia.com/documents/Corter-PetersANGxp1.pdf.

Melhuish, E., Belsky, J., & Barnes, J. (2011). Sure Start and its evaluation in England. In R.E. Tremblay, R.G. Barr, R. DeV. Peters, & M. Boivin (Eds.), *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2010:1-7. Available at: http://www.child-encyclopedia.com/documents/Melhuish-Belsky-BarnesANGxp.pdf.

Ontario Ministry of Child and Youth Services. (2011). *Defining Integration: A Best Start Working Paper*, July.

Pascal, C. (2009). *With our best future in mind: Implementing early learning in Ontario (Report to the Premier by the Special Advisor on Early Learning)*. Retrieved November 20, 2010, from http://www.ontario.ca/ontprodconsume/groups/content/@onca/@initiatives/documents/document/ont06_018899.pdf.

Siraj-Blatchford, I. & Siraj-Blatchford, J. (2009). *Improving development outcomes for children through effective practice in integrating early years services: knowledge review 3*. London: Centre for Excellence and Outcomes in Children and Young People's Services (C4EO), Early Years Knowledge Review 3.

St Pierre, R.G., Layzer, J.I., Goodson, B.D., & Bernstein, L.S. (1999). The effectiveness of comprehensive, case management interventions: Evidence from the national evaluation of the comprehensive child development program. *American Journal of Evaluation, 20*(1), 15-34.

Toronto Best Start Network (2007). *Best Start Plan: Toronto Vision for Children Survey Report*. Retrieved April 18, 2009 from http://www.toronto.ca/children/bs/bs_survey_report_final.pdf.

Toronto First Duty. (2006). *Toronto First Duty Phase 1, Summary Report 2006*. Available at: http://www.toronto.ca/firstduty/TFD_Summary_Report_June06.pdf.

APPENDIX 1

Toronto First Duty Program at Bruce WoodGreen Early Learning Centre: Time, Space, Materials and People

Heather Finch

Overview

The Bruce WoodGreen Early Learning Centre (BWELC) has functioned as the continuing demonstration site and test bed for the Toronto First Duty model, blending child care, kindergarten education and family support programs. BWELC has been based on a community partnership between Bruce Junior Public School and WoodGreen Community Services, a multi-service community agency supporting young children and families. In this partnership, WoodGreen employs early childhood educators who collaborate with classroom teachers employed by the Toronto District School Board at Bruce School during the school day and who provide child care before and after school, with connections to other community agencies and supports. This appendix focuses on the structural arrangements for the full-day early learning kindergarten programming at BWELC, delivered by the integrated staff team of early childhood educators and kindergarten teachers. Descriptions of these arrangements were recorded using the Time, Space, Materials and People Framework (adapted from Nash, 1979; Astington & Pelletier, 1996). These descriptions were gathered in 2011.[1] Note that the TFD and BWELC model stressed continuous improvement and a dynamic approach to programming; as a result, this is a snapshot of the BWELC program at one point in time.

There are two kindergarten classrooms at Bruce Junior Public School, Room 3 and Room 9. The program in Room 9 is a morning-only kindergarten class, and Room 3 houses the Full-Day Early Learning – Kindergarten Program. In each room, at least one early childhood educator (ECE) and a classroom teacher work together to implement an emergent curriculum that blends the *Full-Day*

[1] In September 2012, the BWELC transitioned into the Full-Day Early Learning Kindergarten model being implemented province-wide as Bruce School became a FDELK site.

Early Learning-Kindergarten Program Draft and *Early Learning for Every Child Today, 2007*. In the morning, three ECEs and one classroom teacher work as a team in Room 3. At lunchtime, 14 children and the ECE from Room 9 join the Room 3 program. For the afternoon portion of Full-Day Learning at Bruce, three ECEs and one classroom teacher care for and work with 40 children in Room 3.

Staff Designed Programming

Twice per week, the ECEs and classroom teacher meet to plan the program, using children's interests and the continuum of development outlined in *Early Learning for Every Child Today* (ELECT) for guidance. Throughout the week, the team of educators observes the children during free play and makes note of the children's interests and progress. During planning, the team uses this

Bruce WoodGreen Early Learning Program Plan

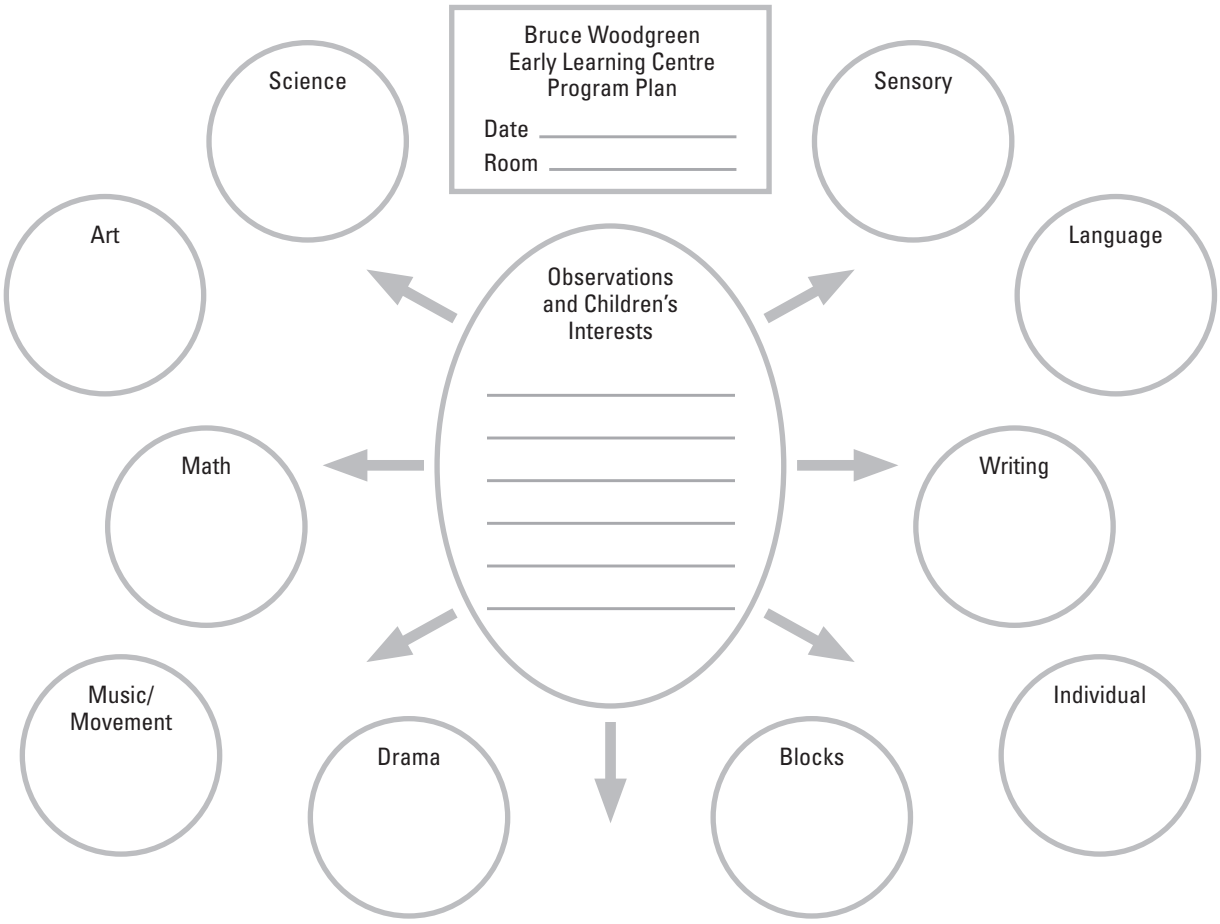


FIGURE APPENDIX 1.1 This figure is a curriculum planning template. It embeds the principles from ELECT and the goals from the Full Day Early Learning Kindergarten Program (Draft). Educators develop the plan based on observations, and interests demonstrated by the children, adding new ideas for curriculum implementation.

information to collectively plan activities for various domains of learning (e.g., literacy, math, music, visual arts, etc.). These activities are recorded on poster-sized paper that is displayed in the room (Figure Appendix 1.1). The document includes the principles of ELECT and the goals of the kindergarten program to ensure synergy between both frameworks. One planning sheet is used for a two-week period, at which point a new sheet is posted on top of the old, allowing for quick and easy reference to past activities. While the team of educators has two designated planning sessions, planning is ongoing and dynamic. At the same time, TDSB teachers have 220 minutes of designated planning time, while the ECE time for planning is designated by the program coordinator, creating challenges to ensure consistency in time available to implement a blended program. As new observations are made, the educators add to the existing plan and casually discuss new ideas with each other. The educators refer to this plan daily when arranging the room and setting up materials at each centre.

The Learning Environment

Room 3, at approximately 800 square feet, is the school's former gym and is therefore quite spacious (Figure Appendix 1.2). It easily accommodates several centres as well as tables and chairs that seat all of the children at one time. These multi-purpose tables are used for half-group writing lessons, various small group activities, snack and lunch. Approximately 95 % of the space in the classroom is for the children, while the remaining 5 % is for adult use, including a desk for each of the educators, a filing cabinet and kitchen space for food preparation. Children's artwork, graphs and charts from their investigations, and instructional aids such as the alphabet, weekly and monthly calendars and the daily schedule adorn the walls. The weekly program plan, the ELECT document, educators' schedules and expectations and a birthday board with all of the children's birthdates are posted above the ECE's desk.

Gathering Space and Classroom Library

At either end of the classroom lie two large carpets—the red carpet and the blue carpet. Both carpets allow for a comfortable gathering of at least half of the children, while the red carpet is large enough to seat the entire group of 40 children. At each carpet space there is a big chair for the educator, an easel and a bookshelf filled with a wide variety of fiction and non-fiction books. The books rotate according to the children's current interests. Some books represent the diversity of children in the classroom and include characters of varying abilities, different races and ethnic backgrounds and diverse family structures.

At the red carpet there is one computer that is sometimes open for one or two children to play educational games. There is also one laptop and printer the children use when working with an educator on a project. One project, for example, used photographs an ECE took of children acting out a story to create a storybook. Once the photographs were uploaded to the computer, children and the ECE worked together to make a book. As each child told his or her story, the ECE typed the words that accompanied the corresponding photograph.

Bruce WoodGreen Learning Environment

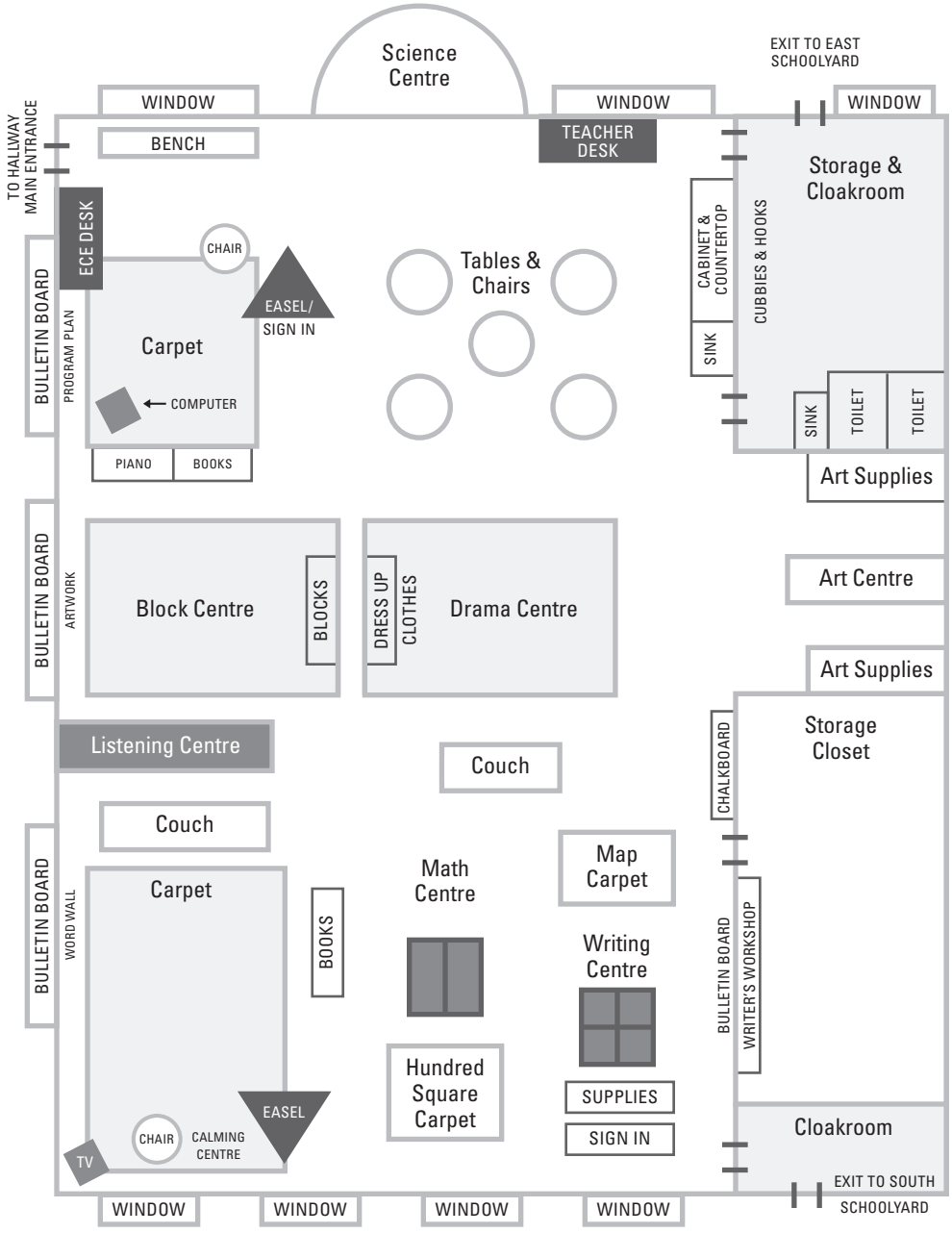


FIGURE APPENDIX 1.2 This figure provides the physical layout of the space in the learning environment at BWELC. It shows the variety of interest centres, areas for individual and group play, learning spaces and space for the educators.

Books for a Book Exchange Program are housed in the hallway just outside the door of the classroom. The books are levelled readers, and parents are free to take and return books as they like. Above the Book Exchange bin is a Parent Information board where school and community events as well as parenting resources are posted for caregivers. Another vehicle for communication and collaboration with parents and caregivers is a mailbag for each child. The mailbags

are mounted at children's eye level on both sides of the hallway leading to the entrance of the classroom. In these mailbags, the educators place children's projects and artwork as well letters to parents and caregivers. Often on their way home at the end of the day, the children excitedly check to see if they have "mail."

Activity Centres

At each centre, a sign is posted with the maximum number of children allowed to play there at any given time.

Dramatic Play and Block Centres

In the centre of the classroom there is a large area for dramatic play that includes paper and pencils, a puppet theatre, a kitchen play set, dolls and a cupboard that is stocked with fabric, scarves and dress-up clothing. The educators have strategically set up the Block Centre adjacent to the Dramatic Play Centre, which allows for block creations to be used in pretend play. The Block Centre includes large and small wooden blocks and clipboards, paper and pencils for strategic planning and illustrations if the children so choose.

Science Centre

A shelving unit with tubes, beakers, containers of varying sizes and shapes, magnifying glasses, tongs and science books stands at the entrance to the Science Centre. Within this half circle alcove, tables of collected materials from outdoors, plants and a sensory table are available for observation and exploration. During our visits, a butterfly terrarium was set up in the Science Centre where children observed the chrysalis stage of the butterfly life cycle. The butterflies were scheduled to be released three days after our visit, an event the children anxiously awaited.

Math Centre

Next to the two tables and the hundred square carpet are the math manipulative materials, which include pattern blocks, multi-link cubes, puzzles, tape measures and playing cards. The book collection at the red carpet and near the Math Centre includes books conducive to discussing numeracy, data management and geometry. Board games such as *Snakes and Ladders* are located in the storage closet, which are available upon request from an educator.

Writing Centre

Adjacent to the Math Centre, the children have access to a plethora of writing supplies at all times. In labelled drawers, the children can find blank and lined paper, pencils, crayons, pencil crayons, markers, chalk and magnetic letters. Writing Without Tears kits are used during small group lessons and are also available to children during free play. On the wall near the Writing Centre is a large magnetic chalkboard mounted at the children's height for easy accessibility.

Art Centre

On either side of the long table, two shelving units overflow with various kinds

of paper, well-sorted odds and ends, glue, scissors, markers, oil pastels and crayons. If a painting activity is not set up, the children may ask for paint and paint brushes from an educator. Inspired by their butterfly findings as well as Barbara Reid's stories and illustrations during story time, children were making clay scenes in the Art Centre during our visits.

Calming Centre

Near the large carpet, a sign reading Calming Centre is posted on a bulletin board. Directly underneath the bulletin board is a beanbag chair where children can go when they are feeling angry or frustrated and need time to themselves to calm down. Children were observed going to the Calming Centre on their own accord as well as at the suggestion of an educator.

Cloakroom, Washrooms and Storage

There are two cloakrooms, a large one at the east end of the room and a smaller one at the west end. The eastern cloakroom houses cubbies and hooks labelled with children's names and a bench in front of them for children to sit while they change their shoes. There is also a closet for the educators' belongings, a refrigerator and a large storage unit with one side filled with children's books organized by subject and the other side with extra art and office supplies. Two private, non-gendered toilets and a sink occupy the remaining space.

Just outside the eastern cloakroom is a long counter with a sink and cabinets above and below. The countertop serves as space for food preparation and includes a microwave and draining rack for washing dishes before they are sent to the kitchen for sanitizing.

The western cloakroom has cubbies, hooks and a bench labelled with the names of children who join Room 3 in the afternoon. There is also space to store large outdoor items that are not being used (e.g., a plastic kitchen set). This cloakroom has a door that goes outside to the southern schoolyard. For safety reasons, an adult must accompany children when storing or retrieving their belongings from this room.

Next to the western cloakroom is a large storage closet stocked with toys, board games, puzzles and math manipulatives that are rotated in and out of the classroom based on the children's interests.

The Program

Extended Day: Before and After School Programs

The extended day program opens in the kindergarten room at 7:30 a.m. and children check in with WoodGreen ECE staff before participating in program activities. The School Age children are combined with the kindergarten children first thing in the morning from 7:30–8:15 a.m. and then an SA staff takes them outdoors. They are combined again at the end of the day from 5:45–6 p.m.

The second ECE staff arrives at 8 a.m. and the programming continues. At 8:30 a.m., the children go outdoors with the ECE staff until 9 a.m.

The official school day begins at 9 a.m. when the children are supervised by the TDSB ECE and teacher team until 3:15 p.m. At this time, the WoodGreen ECE staff members arrive and set up the after-school program in the kindergarten room. The children participate in outdoor programming from 5–6 p.m.

The school day begins at 8:45 a.m.. Children of all ages (any age from preschool to Grade 6) who arrive prior to 8:45 a.m. begin their day in the preschool room. About five to ten minutes before outdoor play begins, the Room 9 ECE arrives and takes the kindergarten-aged children to Room 3 where they put their belongings away. The children get dressed for outside, and the Room 9 ECE leads them to the northern schoolyard for outdoor play.

Arrival and Outdoor Play

As children arrive for full-day learning at Bruce Junior Public School, they are greeted by the five educators of Room 3 and Room 9 (three ECEs and two classroom teachers) in the northern school yard. They join other kindergarten children who just arrived from the preschool room where their parents dropped them off for Before Care. The children explore the schoolyard as they choose: playing on the climber surrounded by woodchips; riding bikes on the pavement; reading books on a blanket; playing tag; hopping their way along the hopscotch mat; or engaging in dramatic play, often using the wood chips for anything from ice cream to building blocks. Some children choose to search for insects or investigate the makeup of the wood chips or the leaves and crabapples that have fallen from the tree just outside the schoolyard.

While the children are playing, the educators engage with both the parents and the children. Some parents stay to interact with the educators, using this opportunity to briefly inquire about their child's development as well as the program. Parents also use this time to socialize with other parents and to observe their children playing with their peers. At all times, the educators ensure children are playing safely, and when they are not speaking with parents, they become the children's playmates by invitation, extending the children's learning with questions or suggestions.

After approximately 30 minutes of outdoor play, the teacher calls out, "Hands on top," and the children stop what they are doing, look at an educator with their hands on their heads and respond, "That means stop." The teacher tells the children they have five more minutes to play. The children quickly return to their activity of choice. When five minutes have passed, the teacher blows the whistle to a rhythm. The children respond by clapping the same rhythm, take the toys with which they were playing to the shed and line up near the entrance to the building. The children find a partner and line up in the appropriate line, Room 9 along the fence and Room 3 along the building.

To the Classroom

The Room 9 classroom teacher and ECE lead their class on into the building first. With one educator at the front of the line, one in the middle and the other at the end, the Room 3 teacher and ECEs then lead their class from the northern schoolyard through the main hallway of the school to Room 3. When they arrive at the classroom door, the educator at the front of the line officially greets the class as a whole and asks, "What are the first three things we do when we go into the classroom?" Several hands shoot up, and the educator chooses one child. The child answers, sometimes with the assistance of a peer or an educator: First, hang up your jacket. Second, wash your hands with soap. Third, sign in. When the child has finished reminding the class of their tasks, the teacher gives the Question of the Day (e.g., how many legs does a centipede have?). The children sign in by answering the Question of the Day with their name next to their answer.

While the children complete their entry tasks, the educators mark attendance, make last minute preparations for activities, assist children when necessary and check up with each other regarding the schedule and any change of plans for the day. The Question of the Day is written on two pieces of chart paper, one near the red carpet and the other near the blue carpet. The 28 children are divided into two groups for Circle Time, one led by the ECEs and the other by the classroom teacher, to make this group time more effective. Once the children have signed in, they go to their respective carpets and choose a book for independent reading as they wait for their entire half group to gather. Fifteen minutes after the class began its transition from Outdoor Play to the classroom, the half groups gather on the two carpets and Circle Time begins.

Free Play

The educators bring 20 minutes of Circle Time to a close by announcing the centres that are open for the day and any new activities or materials that have been added. The children quickly make their way to their centre of choice. Their options include:

• Dramatic Play	• Block
• Writing	• Science
• Listening	• Math
• Classroom Library	• Snack

TABLE APPENDIX 1.1 - CHOOSING PLAY
This figure shows the variety of options the children have during free play. Children move freely from one centre to another without formal transitions.

Depending on the day, children spend between 30 and 60 minutes in free play, and the time spent at each centre varies for each child. Children move freely from one centre to another without formal transitions. Each centre has a sign

that tells the children how many of them can play there at one time. Children write their names on a sign-up sheet when they arrive and erase their names when they leave. This capacity limit serves as a preventative measure for conflict among children and, with support from of the educators, encourages children to try out different centres throughout the day and week.

Snack is set up as a centre. During free play, children may eat snack whenever they feel hungry and may have one serving. There are signs at the snack table that tell children how many pieces of each food make a serving. For example, a sign indicates one piece of cheese (with a picture of cheese) and another sign reads two pieces of vegetables (with a picture of carrots and celery). The children help each other read the signs, and if they need assistance, they ask an educator.

Real Food for Real Kids, a local catering company that prepares food using fresh, local and organic ingredients, provides snack. The food is delivered to the school each morning, and an educator plates the food in a manner conducive to children serving themselves. "Last call for snack" is given 15 minutes before tidy up time.

Free play comes to a close much like outdoor play. One of the educators gives a five-minute warning, and after five minutes she turns off the lights and asks, "What time is it?" The children respond, "Tidy up time!" Each child helps tidy up the room, beginning in the centre where he or she was last playing. Once children have tidied up the area in which they are playing, the educators encourage them to help their peers tidy up other areas of the room. When everything has been put back into its place, the children go to the same carpet they went to for opening Circle Time, choose a book and read independently until all children have gathered for Sharing and Story Time.

Focused Lessons

Throughout the week, small groups of children rotate through focused writing lessons with the classroom teacher. Children's writing is displayed on a bulletin board near the Writing Centre in a way that shows each child's writing development over time. Other focused lessons include Physical Education in the gym and Computers in the Computer Lab once per week. In addition, the Grade 5/6 class visits Room 3 each week for Reading Buddies with the kindergarten children.

Other lessons and small group activities begin from children's interests. For example, one child was disappointed to find the Block Centre at its maximum capacity. As she walked away from the Block Centre, the ECE noticed she seemed a bit sad. The ECE walked over to the child, saying, "You seem like you are sad." The child told her what happened, and the ECE suggested they sit together and do a handclap. After the handclap, the ECE hugged the child, gave her a book of experiments and sat her on her lap to read together. As they were reading, the child began to ask questions about the pictures in the book and wanted to do an experiment exploring pressure and force. The teacher gathered

the necessary materials and set them up at one of the large tables. Within a few minutes, eight children were gathered around the table. The ECE asked the children what they think will happen. With gestures and sentence fragments, the children collaboratively offered a prediction of what will happen. The children took turns performing the experiment and some offered explanations of how the air from a balloon makes a straw move from one end of a string to the other.

Sharing and Story Time

For the last 20 minutes before lunch, the children gather in half groups on their respective carpets for Sharing and Story Time. During this activity, children share stories of their play and learning from the morning, and depending on the time availability, the educator or a child reads a book aloud to the group. The educators then dismiss the children individually who stay only for the morning. These children get their jackets from the cloakroom and wait on a bench near the door for their caregivers to pick them up.

Lunch: Health and Learning Together

At this time, the classroom teacher has a lunch break. Children from Room 9 who stay for the afternoon program and the ECE from Room 9 join the children and ECEs in Room 3. Two children from a nearby French Immersion morning program arrive by bus and also join the group for lunch and the afternoon program. A fourth ECE brings lunch from the kitchen where it has been kept warm since Real Food for Real Kids delivered it earlier in the day. The children read independently or in pairs while the ECEs prepare lunch and set the tables. When lunch is ready, an ECE sends children in pairs to wash their hands. The children are assigned to groups for lunch. They sit at the tables where they find the placemat with their name and group colour.

Lunch is set up buffet style and consists of a protein, grain, vegetables and milk. Substitutions are made for children with allergies or special diets, and fruit is served family style to each table for dessert. Each table is called by colour to come to the buffet and serve themselves, with the help of an ECE if needed. The three ECEs in the room sit with the children during lunch, modeling good table manners and appropriate topics of conversation during a meal and encouraging discussion of ideas. In addition, the educators encourage children to try new foods and take advantage of teachable moments on topics such as health, sharing and etiquette.

Lunch lasts for approximately 50 minutes. As with most transitions throughout the day, call and response are used to get the children's attention. An ECE calls out "Stop, look, and listen," and the children reply, "Okay!" A five-minute warning is given before the end of lunch. As children finish eating, the ECEs dismiss them one by one to scrape any unwanted food into recycling and put their plates and cups in the sink. The children wash their hands and get ready to go outside. Once ten children are ready, an ECE takes this group outside. The remaining children follow in the same fashion, with the last ECE and group of children responsible for cleaning. The children take turns being lunch helpers,

wiping the tables and sweeping the floor. The ECEs' lunch break is scheduled during the children's lunch hour and shortly after the teacher returns from her break.

The Afternoon

Like the morning, the afternoon begins with Outdoor Play but this time in the southern schoolyard. The children are again free to explore the space and equipment, as they desire. Instead of a climber, the southern yard has more open space—two grassy areas, three trees, a raised garden bed and a large concrete surface. A long shed contains similar toys and equipment to those found in the northern shed.

Children who attend the kindergarten program in the afternoon arrive during this time. When parents and caregivers drop off their children in the afternoon, they tend not to stay to chat or observe their children like the parents do in the morning. However, the educators are available to caregivers to briefly discuss any concerns if they so desire, as the classroom teacher has returned from lunch and there are now two ECEs to accommodate the increase in number of children.

The afternoon schedule mirrors the morning time blocks as well as offers varied content and extensions of previous activities.

Time Block (minutes)	Activity
30	Outdoor Play
10-15	Transition to the Classroom
20	Circle Time
30–60	Free Play
20–30	Focused Lesson
20	Shared and Story Time

TABLE APPENDIX 1.2 - PLANNING THE DAY
This figure shows how the children's day is planned, maintaining flexibility to ensure the children experience opportunities that offer a balance of free play and structured activities. Planning of the children's day is similar in the morning and the afternoon.

The afternoon ends with Sharing and Story time. The educator leading the group dismisses the children who go home by name. They get their jackets from the cloakroom and wait for their caregiver on the bench near the door. The children who stay for After Care read a book on the carpet until the other children have left, at which point the classroom teacher is finished for the day and the Room 3 ECE stays with the children.

Transitions

The children move through major transitions from Before Care to kindergarten or kindergarten to After Care extremely smoothly, as these programs are housed on the same floor of one building. To streamline these major transitions even further, ECEs follow the children from one part of the program to the next. For example, one of the ECEs in Before Care follows the children to Outdoor Play, the first activity of the kindergarten program, and the ECE who closes the kindergarten program in the afternoon follows the children to After Care. With shared space and an overlap of educators, the points at which the kindergarten program begin and end are nearly unidentifiable, providing a seamless experience for children.

Conclusions

This program description represents the implementation of the full-day early learning kindergarten program by the blended staff team of early childhood educators and kindergarten teachers at BWELC (see Chapter 3 in this report). Joint staff planning is a key to the implementation of this seamless program. The program takes advantage of activities that fall outside of traditional classroom activities. For example, the day begins outside with physical play for children mingled with engagement with adults; educators and parents are also engaged with each other, mingling and talking. At lunch, Early Childhood Educators eat with children and contribute to naturally occurring opportunities for social and intellectual exchanges. In the classroom, a structured play-based approach contributes to self-regulation (see Chapter 4 in this report) and academic learning. Regular team planning ensures that critical areas of learning and development receive continuing attention and monitoring. Previous TFD research (Corter et al., 2009) has shown that this program has moved to high levels of quality as assessed by the ECERS-R instrument, and that quality depends on the level of integration among classroom professionals and the administrative team.

References

Astington, J.W. & Pelletier, J. (1996). The language of mind: Its relation to teaching and learning. In D. Olson & N. Torrance (Eds.), *Handbook of Psychology in Education: New models of learning, teaching and schooling* (pp. 593-619). Cambridge, MA: Basil Blackwell.

Corter, C., Pelletier, J., Janmohamed, Z., Bertrand, J., Arimura, T., Patel, S., Mir, S., Wilton, A., & Brown, D. (2009). *Toronto First Duty Phase 2, 2006-2008: Final Research Report*. Available at: http://www.toronto.ca/firstduty/TFD_phase2_final.pdf

Best Start Expert Panel on Early Learning. (2007). *Early learning for every child today: a framework for Ontario early childhood settings*. Toronto, ON: Author.

Nash, B.C. (1979). *A principal's or administrator's guide to kindergarten: what to look for in kindergarten programmes and how to know when you see it*. Toronto: Ontario Institute for Studies in Education.

APPENDIX 2

All figures in Appendix 2 are adapted from Toronto First Duty Indicators of Change (Eric Jackman Institute of Child Study/ Atkinson Centre at OISE, University of Toronto); March 2011.

Indicators of Change for Full-Day Early Learning Kindergarten Program

Tracking Practices of Integration

Susan Anderson

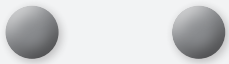
1	Co-location		ECEs and teachers work as individuals in separate programs.
2	Communication		ECEs and teachers share/ discuss planning and observations with each other.
3	Coordination		ECEs and teachers organize program planning and implementation to complement each other.
4	Collaboration		ECEs' and teachers' roles and responsibilities overlap with each other.
5	Integration		A single common program—ECEs and teachers are an early learning team with interchangeable roles and responsibilities.

TABLE APPENDIX 2.1 Definitions for play categories used in the COF

Early Learning Environment

	1 Co-location	2 Communication	3 Coordination	4 Collaboration	5 Integration
Curriculum Framework & Pedagogical Approach	ECEs and teachers plan separate programs.	ECEs and teachers communicate plans with one another.	ECEs and teachers coordinate plans with one another, ensuring that the program is holistic.	ECEs and teachers work together on significant elements of the curriculum. (e.g., share a common approach to early literacy).	Early learning team uses a common curriculum approach and similar pedagogical strategies.
Daily Schedules & Routines	ECEs and teachers follow separate routines and schedules.	ECEs and teachers communicate their routines and schedules across separate time periods.	ECEs and teachers coordinate their routines and schedules with one another.	ECEs and teachers establish routines and a schedule that includes joint responsibilities.	Early learning team establishes common routines and schedule, for which both are responsible.
Use of Space	ECEs and teachers are in separate spaces within the school/community.	ECEs and teachers communicate their plans for the environment; however it is the responsibility of one staff.	ECEs and teachers organize the space to complement one another's programming.	ECEs and teachers together organize common spaces within the classroom and outdoor environment.	Early learning team designs and sets up the program space including indoor/outdoor early learning environments.
Children's Development & Progress	ECEs and teachers track and document children's development and early learning using tools and approaches.	ECEs and teachers discuss their respective tools and approaches to monitoring and assessing child development.	ECEs and teachers complement one another's techniques and strategies for observing and documenting children's progress.	ECEs and teachers work together to use the same observation tools to monitor some areas of children's developmental progress.	Early learning team conducts on-going observations and assessment of students using common tools and strategies.
Program Quality	ECEs and teachers assess program quality using their own approaches and measurement tools.	ECEs and teachers assess each other's program quality tools and related regulatory requirements.	ECEs and teachers use approaches to monitor program quality that complement each other.	ECEs and teachers combine their individual program quality approaches and information for a holistic view.	Early learning team monitors program quality together using a common approach.
Extended Day Program	Extended day program is located in school or nearby school. Teachers, ECEs and principal are unaware of extended day program content or routines.	FDELK and extended-day educators discuss respective program content and schedules with each other and are aware of what each other does.	FDELK educators in full-day and extended-day programs coordinate their separate programs, space, schedules and routines with each other.	FDELKP and extended-day program have designated separate spaces and shared spaces. Full-day and extended-day educators establish complementary schedules, routines and pedagogical strategies.	FDELKP and extended-day program share the same space programming across core and extended day. The early learning team uses a common approach to monitor children's early learning and development

TABLE APPENDIX 2.2 - INDICATORS OF CHANGE: TRACKING PRACTICES OF INTEGRATION - EARLY LEARNING ENVIRONMENT

The Indicators of Change measure was developed to evaluate and support the process of moving from separate to integrated program delivery. This Figure shows components of this process in the early learning environment.

Early Learning Team

	1 Co-location	2 Communication	3 Coordination	4 Collaboration	5 Integration
Program Planning & Implementation	Either ECEs or teachers are responsible for the planning and implementation of program. The other plays a supporting role. No joint planning time.	ECEs and teachers share plans with each other. Either teachers or ECEs may be the lead for planning and implementation of program.	ECEs and teachers coordinate individual planning with each other.	ECEs and teachers plan and implement some aspects of the program together and some parts separately. Joint planning time.	Early learning team plans and implements a common program.
Behaviour Guidance	ECEs and teachers establish their own individual expectations for children's behaviour.	ECEs and teachers share and discuss their behaviour expectations with each other.	ECEs and teachers have complementary behaviour guidance protocols.	ECEs and teachers share common approaches during most of the day.	Early learning team establishes a common behaviour guidance protocol.
Roles & Responsibilities	ECEs and teachers are assigned separate roles and responsibilities.	ECEs and teachers are aware of and discuss each other's roles and responsibilities.	ECEs and teachers have complementary responsibilities and coordinate the implementation of activities.	ECEs and teachers share significant responsibilities to plan and implement the daily program.	Early learning team members have common roles and responsibilities.
Staff Development	Teachers participate in education-based learning and organizations. ECEs participate in early childhood professional learning and organizations.	ECEs and teachers communicate with regard to each other's staff development activities.	ECEs and teachers take part in staff development opportunities that complement each other.	ECEs and teachers plan staff development opportunities that support the goals of the program.	Early learning team takes part in common, professional growth/ networking and staff development opportunities.
Extended Day	Educators in FDELKP and extended-day program plan separately, take part in separate PD and report to different supervisors.	Educators in FDELKP and extended-day program communicate regarding program planning and review each other's activities.	Educators in FDELKP and extended day take part in occasional common PD and coordinate some joint activities. Extended programs are informed of the behaviour guidance strategies in the FDELKP.	Educators in FDELKP and extended-day program plan together and take part in common PD. Extended day programming is complementary to FDELK. Team and extended programs share some common behaviour guidance protocols.	Early learning team from FDELKP and extended day program plan together, take part in common staff development, etc.

TABLE APPENDIX 2.3 - INDICATORS OF CHANGE: TRACKING PRACTICES OF INTEGRATION - EARLY LEARNING TEAM

This figure shows components of the professional partnerships between educators working toward a common goal of an integrated early learning environment. It provides an opportunity for ECEs and teachers to evaluate how closely their pedagogical practice, approach to behavior guidance and opportunities for professional learning are aligned.

Parent Participation

	1 Co-location	2 Communication	3 Coordination	4 Collaboration	5 Integration
Parent Input & Participation in Programs	ECEs and teachers have separate communication with parents and provide separate opportunities for parental engagement (e.g., individual conversations, in-class participation).	ECEs and teachers discuss parental concerns, conversations and participation with each other.	ECEs and teachers use common occasions (e.g., school registration, orientation, family nights) to engage parents.	ECEs and teachers use ongoing joint opportunities to engage parents in the program and seek their feedback about the program.	Early learning team has common strategies to engage parents' participation in the program and solicit their input about the program.
Parent Knowledge	ECEs and teachers individually talk to parents about resources for parenting supports.	ECEs and teachers share information with each other about resources for parents.	ECEs and teachers complement each other's information to and resources for parents.	ECEs and teachers establish joint opportunities to share information and resources with parents.	Early learning team establishes common information and resources for parents.
Relationships with Families	ECEs and teachers develop separate relationships with families.	ECEs and teachers discuss their interactions with parents with each other.	ECEs and teachers complement one another's interactions with families.	ECEs and teachers work together to establish their individual relationships with families.	Early learning team has a common, pro-active approach to building connections and relationships with families.
Extended Day	FDELKP and extended-day staff have separate communication with families.	FDELKP staff and extended-day staff share their communications with families as needed.	FDELKP and extended-day staff coordinate specific events and activities (e.g., joint registration and orientation session).	FDELKP staff and extended-day staff establish ongoing events and activities to engage parents' input and participation.	Early learning team has common strategies to engage and support parents.

TABLE APPENDIX 2.4 - INDICATORS OF CHANGE: TRACKING PRACTICES OF INTEGRATION - PARENT PARTICIPATION

This figure provides measures of parent participation in an evolution from separate parent communication by early childhood educators and teachers toward an integrated and seamless parent engagement strategy.

Document References

ER: Full-Day Early Learning Kindergarten Program for Four and Five-Year-Olds, *A Reference Guide for Educators*.

ELP: *The Early Learning Program: Key Facts*, MOE ELP factsheet, Winter 2010, v4.

DTC: FDK: *EL11 Year 3 Site Selection Teleconference with Directors of Education*, October 7, 2010, Qs & As, Directors Teleconference EL11Qs & As English.doc

MEMO: EL9 Memo (English).pdf, June 22, 2010.

BILL: Bill 242, the *Full-Day Early Learning Statute Law Amendment Act, 2010* http://www.ontla.on.ca/bills/bills-files/39_Parliament/Session2/b242rep.pdf

MEMO-EL5: Memo EL-5: *Release of the Full-Day Early Learning-Kindergarten Program* (Draft version) http://cal2.edu.gov.on.ca/april2010/2010EL5.pdf

CURR: *The Full-Day Early Learning – Kindergarten Program Draft Version* http://www.edu.gov.on.ca/eng/curriculum/elementary/kindergarten.html

Corter, C., Bertrand, J., Pelletier, J., Griffin, T., McKay, D., Patel, S., et al. (2007). *Toronto First Duty Phase 1 Final Report: Evidence-based Understanding of Integrated Foundations for Early Childhood*. Retrieved September 28, 2010, from http://www.toronto.ca/firstduty/tfd_phase1_finalreport.pdf.