

The Impact of School Eating Environments on the
Wellbeing of Children
Transitioning from Full-Day Childcare to
Full-Day Kindergarten

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Abstract

This study explored the impact of school eating environments on the wellbeing of children in the Full Day Kindergarten (FDK) Early Learning Program in the Toronto District School Board (TDSB) and compared children's experiences of eating in FDK with those in childcare settings. Drawing on critiques of dominant approaches to evaluation, the study employed a wellbeing model that includes material security, relationship, engagement and meaning and used the Mosaic approach to participatory research with young children. Structured across three phases, the study followed a cohort of children in three childcare centre-school pairings as they transitioned from full day childcare to full day kindergarten. Phase 1 involved full day observations, self-reported wellbeing, semi-structured interviews and drawings in the childcare centre. Phase 2 involved two visits and semi-structured interviews in the after-school care setting in the first months of kindergarten. Phase 3, like phase 1, involved full day observations, self-reported wellbeing and semi-structured interviews in the classroom setting throughout the final six months of junior kindergarten (the first year of schooling in the province of Ontario, for children who turned four by December 31 of the school year). Whereas participants reported overwhelmingly positive feelings about lunch time in the childcare setting, reports in the FDK setting showed greater variation with few positive responses relating to the lunch experience itself. In interviews in the school setting, the child participants described not having enough time to eat their lunches, feeling sad that staff worked to prevent them from talking, and being happy about being able to choose some of the items in their lunches. Both parents and staff expressed concerns regarding the kindergarten eating environment and observations revealed the emergence of safety concerns, declining nutritional quality and confirmed both child and adult concerns. The study signals an opportunity for young children to meaningfully participate in wellbeing analyses of their environments. Furthermore, analysis

suggests that the kindergarten eating environment is suboptimal and could be improved through the implementation of regulations and practices present in the childcare setting.

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Preface

Before you lies the dissertation, “The Impact of School Eating Environments on the Wellbeing of Children Transitioning from Full-Day Childcare to Full-Day Kindergarten,” based on a one year study with a cohort of children as they went through this transition in the Toronto District School Board. It has been written to fulfill the requirements of the Doctor of Philosophy of Environmental Studies at York University. The research and associated methods were approved by the Human Participants Review Sub-Committee at the York University Office of Research Ethics and the External Research Review Committee at the Toronto District School Board.

My motivations for my research are deeply personal. As someone who grew up the child of a single mother on social assistance in Toronto Community Housing, I have first-hand experience of childhood hunger, food insecurity and the feelings of shame and social exclusion that go along with it. For this reason, since my undergraduate degree in International Development Studies, my work has centred around issues of food security, food production, food systems and food sovereignty. This has included academic work, being the owner of an independent vegetarian café serving local produce in Halifax, working in urban agriculture in Havana, and coordinating a garden mentor project that brought children, senior mentors and youth volunteers together at the Ecology Action Centre. Throughout my career, food has remained a central theme.

As a person who has survived prolonged childhood trauma and was failed by the very systems intended to protect children, I am profoundly committed to supporting, giving voice to,

and advocating for vulnerable populations. I spent years working as a counsellor assistant for developmentally delayed adults in community residential settings, worked with special needs children when I was a summer camp counsellor, focused some of my work in Havana on working with children in government care and the elderly, and carved a niche at my cafe catering to people with special dietary needs many of whom, at the time, could not safely eat out anywhere else in the city. Improving wellbeing, particularly the wellbeing of vulnerable populations, is a key driving force in my endeavours.

More specifically, the motivation for this study came in the 2012-2013 school year, the third year of the Full-Day Kindergarten (FDK) rollout in Ontario. My eldest child began FDK that year, I knew parents of children starting FDK throughout the city and, as a person with an interest in school food programming, there was a flood of parents, friends of friends, eager to share their “horror stories” about the school lunch environment in the FDK setting in Toronto. Parents described children who had never had difficulties eating before starting kindergarten coming home in tears with completely uneaten lunches, children who had to eat on benches with no tables and spilled their food on themselves daily, children eating lunch at tables that had been cleaned with mops used to clean floors, children having toileting accidents because there wasn’t enough staff to get them to the washroom on time, children hiding under tables to try to escape the noise of the lunch room and being punished for it—the list goes on. Data was later collected for one of these schools, called the Red Mulberry School to protect anonymity, as the motivating case though stories came in from schools all over the city. In the Red Mulberry School (a school that met the site selection criteria for the study), well over 100 three-to-five-year-old children had 20 minutes to eat their lunches in a noisy, crowded lunchroom staffed by 5 untrained lunch supervisors. With minimal investigation, I learned that there are no regulations governing

practice during the lunch hour. It was immediately apparent that there was a need for research to explore the impact that this has on the children in these environments.

Initially, I had hoped to conduct the study in the 2013-2014 school year, on my return from my maternity leave with my youngest child. The process of gaining approval to conduct research within the TDSB was more lengthy than anticipated, so the study was conducted in 2014-2015. Vast amounts of data, in the form of participant interviews, observations, parent surveys and key informant interviews, was collected. This data was transcribed, coded and analysed throughout 2016.

In an effort to make the findings from the study available as quickly as possible, the dissertation was designed in the increasingly popular three-article format. The manuscripts for these articles, drafted in 2017, were submitted to Canadian Food Studies (CFS), Social Indicators Research (SIR), and the Journal of Childhood Studies (JCS). The manuscript for JCS was sent for review, the review process was completed quickly in the fall, and the article, Well-Being in the Kindergarten Eating Environment and the Role of Early Childhood Educators, was published in December (see Appendix E) (Bas, 2017). The manuscript for SIR passed through the Springer Journals' preselection process in the fall and was referred to the Springer Journals Transfer Desk. Their algorithm identified BMC Nutrition, BMC Public Health, Child Indicators Research (CIR), International Journal of Early Childhood, and Maternal and Child Health Journal as better options for that manuscript. At the same time, CFS accepted that manuscript for peer review, but had not identified reviewers. In the intervening months, as I drafted the other portions of the dissertation, I elected to restructure the two un-published manuscripts to improve the flow of the overall dissertation and withdrew the manuscript submitted to Springer Journals. The new

version of the manuscript submitted to CFS is currently under review and is expected to be published in 2018. The new version of the manuscript submitted to SIR will be re-submitted to Springer Journals at the journal CIR this month (July 2018).

In response to feedback from my PhD advisory committee received May 2018, I have further adapted the structure of my dissertation to a modified three article format in order to reduce the repetition of the introduction, methods and framework at the beginning of each of the three manuscripts. Instead, the findings section of the dissertation in Part 2 includes the findings section of each manuscript in addition to demographic information and contextual findings. Similarly, the discussion section of the dissertation in Part 3 includes the discussion section of each manuscript. Additionally, each manuscript appears in its entirety in the appendices (see Appendix E).

Finally, because in order to honour the children and give expression to their experiences, the appendices present detailed summary notes on each participant including complete self-reported wellbeing tables (Appendix F), information from the parent survey, participant interviews, researcher observations (see Appendix G), site notes (see Appendix H) and detailed food consumption tables (see Appendix I).

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List of Abbreviations

BMER Building Mealtime Environments and Relationships
CA Capabilities Approach
CAP Canada Assistance Plan
CCEYA Child Care and Early Years Act
CFS Canadian Food Studies
CHNI Children’s Health and Nutrition Initiative
CRC Convention on the Rights of the Child
CSH Comprehensive School Health
CSPI Centre for Science in the Public Interest
DNA Day Nurseries Act
EA Education Assistant
ECE Early Childhood Educator
ECER Early Childhood Education Report
ERRC Ethics Research Review Committee
FDELKP Full Day Early Learning Kindergarten Program
FDK Full Day Kindergarten
FSC Food Secure Canada
HDI Human Development Index
HPS Health Promoting Schools
JCS Journal of Childhood Studies
JCSH Joint Consortium for School Health
JK Junior Kindergarten
LOI Learning Opportunities Index
MYCS Ministry of Child and Youth Services
OECD
OISE Ontario Institute for Studies in Education
PA Participatory Appraisal
PAC Ph.D. Advisory Committee
PAR Participatory Action Research
PD Participatory Development
PHAC Public Health Agency of Canada
PPM 150 Policy/Program No. 150 School Food and Beverage Policy
PRA Participatory Rural Appraisal
RCMP Royal Canadian Mounted Police
SK Senior Kindergarten
SNO-T Student Nutrition Ontario-Toronto
SNP School Nutrition Programs
SWB Subjective Wellbeing
TDSB Toronto District School Board
TFD Toronto First Duty
TFPC Toronto Food Policy Council
TFSS Toronto Foundation for Student Success
TPS Toronto Police Services
TPSS Toronto Partnership for Student Success
UNICEF
US United States of America

WHO World Health Organization
WWII World War II

PART 1: Research Context

Introduction

The importance of a healthy diet in childhood has been well established both in terms of immediate impacts on health, wellbeing and ability to learn and in terms of forming lifelong habits that contribute to health in adulthood (Butler-Jones, 2008; Langford et al., 2015; Veugelers & Schwartz, 2010). “Schools are widely acknowledged as an appropriate and logical setting in which to promote healthy behaviours.” (Veugelers et al., 2010). Among the leading arguments promoting the use of the school setting as a place to promote healthy eating are efforts to offer universal nutrition to children as a way to address problems of food insecurity and rising rates of obesity. Indeed, in 2008 Dr. David Butler-Jones, the Chief Public Health Officer, noted that when “children go to school hungry or poorly nourished, their energy levels, memory, problem-solving skills, creativity, concentration and behaviour are all negatively impacted” (Butler-Jones, 2008) and rising rates of child obesity have become a growing public health concern.

Despite this, Canada has paid little attention to school eating environments and is the only OECD country without a national school food program. In recent years there has been mounting interest in, and concern over, school food in Canada, in part because UNICEF recently ranked Canada 37th out of 41 wealthy countries in terms of child hunger, food security and nutrition (Brazier, 2017). While many European countries developed school food programs in the early 1900s (Rutledge, 2009) and the US followed suit in 1946 (Morgan & Sonnino, 2008), Canada remains an anomaly among welfare states in its lack of a program. Indeed, a decade ago, in the introduction to their seminal book, “The School Food Revolution,” Morgan and Sonnino make an impassioned case for a global revolution in providing nutritious, quality foods that are

sustainably produced based on the generalization that “governments around the world now accept that an investment in school food today is an investment in the health and welfare of their citizens tomorrow.” (2008, p. xxi) But in Canada we lack specific national standards for school food¹ and school food funding regimes and, consequently, the provision of school food is fragmented, piecemeal, and underfunded (C. J. Henry, Allison, & Garcia, 2003; Leo, 2007; J. Russell, 2004). The absence of policy, programs, regulations and consistent funding to support reliable student nutrition programs represents a lost opportunity to promote healthy eating habits to address child hunger, food insecurity and nutrition, and to contribute to optimal learning environments, both with respect to traditional subjects and positive mealtime socialization and student wellbeing.

Historically, the promotion of school food in Canada has primarily employed targeted approaches and centred on issues of child poverty, but studies found these approaches to have, at best, minimal efficacy, largely due to problems of social exclusion and resulting poor participation rates (Hay, 2000; McIntyre, Travers, & Dayle, 1999; Raine, McIntyre, & Dayle, 2003; Williams, McIntyre, Dayle, & Raine, 2003). More recently the issues of population health and sustainability have come to the fore. Since the 1970s the prevalence of overweight and obesity among children in Canada has risen from 5% to 31.5% for children ages 5 to 17 according to Statistics Canada² (Roberts, Shields, de Groh, Aziz, & Gilbert, 2012). Additionally, as the realities of global climate change are upon us, the federal government, with the proposed National Food Policy for Canada, has joined civil society in calls for a sustainable approach to food production, though they make no mention of school food policy (Government of Canada,

¹ Existing school food standards in Canada are set sub-nationally, at the provincial level.

² Employing World Health Organization (WHO) cut offs.

2017). As will be outlined below, there is now a robust movement working to draw on the school setting to address these interrelated issues. Indeed, the movement advocating a national school food policy in Canada has been gaining momentum and on June 13, 2018 Senator Art Eggleton put forward a motion to initiate consultations on a National Cost-Shared Universal Student Nutrition Program.

It is relatively easy to suggest that Canada should offer healthy food and food education to promote the health and wellbeing of its children, but the devil *is* in the details. At the macro level, each of the provinces has its own set of evolving standards (however weak or inconsistent). Within the provinces, there are many regions and municipalities, often with multiple school boards each. There are programs that may run across an entire board and projects that target specific populations or work with particular schools or even specific classes. At the micro level, each student is a site where multiple realities collide—culture, class, age, place—impacting needs, preferences and, consequently, participation in school food programming, where it exists. Evaluating and addressing the nutritional health and wellbeing of Canadian school children is all the more challenging because it requires the coordination and cooperation of so many actors including the federal government, provincial Ministries of Education, Health and Long-Term Care, Child and Youth Services, municipal governments, school boards, trustees, principals and community members.

The Need for this Study

While conducting exploratory research to determine how best to contribute to the evidence informing this policy debate, a specific, un-researched problem emerged, the lack of regulation for eating environments in Ontario's new full day kindergarten program. The anecdotal accounts

of parents and staff with experiences across the TDSB in the third year of the rollout, 2012-13, suggested an urgent need for research to support improved regulations and practice. Later, during the course of fieldwork, I was able to interview three people who represent the motivating case. A kindergarten teacher, lunch room supervisor and kindergarten classroom ECE each described a lunchtime eating environment for five classes of junior and senior kindergarten students, representing well over 100 children ages 3-to-5. They were given 20 minutes to eat lunch in a lunchroom supervised by 5 untrained adults. The lunchroom supervisor described the lunchroom as chaotic and unbearably loud. The kindergarten teacher noted that the children had a harder time focusing in the afternoon and many appeared to be ravenous. The ECE described the expectation that children eat in that setting as unfair, and each of them recounted narratives of individual children unable to cope with the lunchroom environment.

The fragmented approach to school food in Canada has resulted in an array of approaches which vary by setting. At the same time, there is both a need to understand the impacts of current practices, and improve them, and a lack of research on young children's first-hand experiences. To do this, it is necessary to look at specific sites working with the children who are expected to eat in these settings. This study looks closely at how school eating environments impact child wellbeing in the full day kindergarten program in the Toronto District School Board (TDSB). The TDSB is positioned to offer a variety of insights because it is the largest and one of the most diverse school boards in Canada (<http://www.tdsb.on.ca/About-Us>) and it is situated in a city that is recognized as a world leader in municipal food policy thanks, largely, to the work of the Toronto Food Policy Council (TFPC) since 1991 (<http://tfpc.to/about>).

More specifically, this study followed a cohort of children throughout their transition from full day childcare to full day kindergarten. The childcare setting offered a useful starting point because, while kindergarten children only began eating lunch at school in Ontario with the FDK rollout from 2010/11 to 2014/15, children have been eating meals in regulated childcare centres in Ontario since 1946. Over the course of these seven decades, nutrition policy has evolved substantially, providing the opportunity to compare the nascent FDK school eating environment with a more developed childcare eating environment. Additionally, children who have attended full day childcare have already acclimated to full days in care with their peers and are accustomed to eating meals with their peers (whereas some children begin kindergarten only having been in the care of parents or guardians which would have introduced another range of complicating factors).

Research Questions

The questions guiding this research emerged from comprehensive research on food politics, school food policy in Canada and the application of subjective wellbeing (SWB) as a measure of social development policy, along with anecdotal accounts describing kindergarten eating environments in the TDSB in third year of the FDK rollout (2012/13). Two sets of questions have guided the research process, the former are empirical questions and the latter are theoretical ones.

Empirical questions.

- 1) How do children's experiences of eating in the school eating environment compare to their experiences of eating in the childcare setting?

- 2) How do school eating environments impact the wellbeing of children in the FDK program?

Theoretical questions.

- 1) Can wellbeing be used to evaluate policy governing eating environments in care settings?
- 2) Can very young children meaningfully participate in wellbeing assessments?

Literature Review

The purpose of the literature review is threefold—to outline the relevant policy landscape, to identify gaps in the literature and to make the case for child wellbeing impacts as an essential dimension of understanding how policy affects children.

Policy Landscape

This study takes place in childcare centres and in kindergarten classrooms in Toronto, Ontario, Canada and addresses the food and eating environment in each setting. The histories of early childhood care and education settings and school food policy (or lack thereof) form the context of current debates. This portion of the literature review offers a foundational understanding of these two broadly defined categories, bounded by pertinent jurisdictional and geographic context.

Early childhood.

In Canada, early childhood care and education fall under provincial jurisdiction. Ontario was the first province in Canada to develop a regulatory framework for childcare in Canada, is one of two provinces that meet the Early Childhood Education Report's (ECER) provincial budget spending benchmark for early childhood education³, and is among the 10 provinces and territories⁴ that currently offer a full day kindergarten program (Akbari & McCuaig, 2017). Early childhood care and education in Ontario each have a rich history which connects to issues of

³ While the OECD average spending for early childhood education is over 6%, the ECER benchmark is only 2% in an effort to set attainable goals. To date, only Quebec and Ontario meet this minimum standard (Akbari & McCuaig, 2017).

⁴ The Northwest Territories, Yukon, British Columbia, Ontario, Quebec, Prince Edward Island, Nova Scotia, New Brunswick, and Newfoundland all offer full day kindergarten, making full day kindergarten available to 75% of Canadian 5-year-olds (Akbari & McCuaig, 2017).

social welfare, gender and class equity. This section offers a brief overview of the advent of both regulated childcare and full day kindergarten in Ontario.

The advent of regulated childcare in Ontario.

Ontario was the first province in Canada to develop a regulatory framework for childcare. While some forms of collective care or supervision for children had existed previously in the form of, for example, church organizations and Canada's infamous residential schools, the precursors to contemporary childcare centers emerged during WWII when the federal government offered subsidized childcare in nurseries (for children ages 2 to 5) and daycares (for children ages 6 and up) for the children of women employed in "essential war industries" (Scott, 1998). This voluntary program available to families without means-testing was so successful that a 1945 survey found that 90% of women in Toronto planned to continue working after the war (Prentice, 1993). When the federal government announced that it would terminate this funding at the end of the war, a coalition of progressives, feminists and, among others, then Medical Officer of Health for the City of Toronto, Dr. Gordon Jackson, fought to preserve the childcare services and, in 1946, the Ontario government introduced the Day Nurseries Act (DNA) (Prentice, 1989). This was the first piece of childcare legislation in North America (Prentice, 1996). While nutrition standards were not explicit, a newspaper article describes children eating "a healthful dinner" [lunch] before nap (Grosh, 1948 in Prentice, 1989), contemporary research suggests that mothers felt positively about the "good care and healthy food" children received in nurseries (Prentice, 1993) and the coalition often worked alongside the Committee for a School Lunch (Prentice, 1989) suggesting that nutrition has played an important role in Ontario Childcare Centres from the outset. In the first few years of the DNA, all 13 day nurseries and six of the day

care centres that had operated under the wartime measure, continued to operate with funding from the city of Toronto and the province of Ontario (Prentice, 1989).

By 1951, however, Toronto City Council and the Ontario Ministry of Public Welfare had closed over half of the nurseries. In an era of intensifying Cold War anti-communism, child care advocacy, child care services along with school food provisioning were publicly maligned as manifestations of communism. In a move that parallels contemporary targeting of so-called “designated areas” for student nutrition programs, admission to child care centres was guarded with strict eligibility criteria designed to “eliminate from care those children of mothers who work from choice rather than from economic necessity” (Toronto City Council Minutes, 1946 in Prentice, 1989). In the same vein, a Board of Education Trustee argued fervently against providing free milk to school children arguing that it would cause a “loss of initiative and entrepreneurship” and, thereby, would “do far more harm than good” (Toronto Star, 1947, in Prentice, 1989). On the surface, the daycare restrictions were meant to focus subsidized care for those families in need but, taken in conjunction with criticism of advocacy for nutrition in schools, these policies appear directed at a particular, and moralizing, view of the role of women as mothers and caregivers. Similarly, Carbone (2016) cites moralizing approaches which frequently placed blame on mothers and, as in the child care debates, contention regarding the ‘worthiness’ of low-income families and mothers in her analysis regarding Ontario’s failure to implement a universal school lunch program during the postwar reconstruction period. Against the backdrop of post-WWII communist fears, sexist notions of the family significantly reduced access to childcare and prevented the implementation of hot lunch programs in schools.

Over the course of many decades and political climates, the DNA evolved to offer clear, age-specific regulations regarding the provision of nutritious meals and snacks, staff to child ratios and staff training (see Appendix A for DNA nutrition and staff ratio regulations). Subsequent to the completion of field work for this study, the DNA was replaced by the Child Care and Early Years Act, 2014 (CCEYA) which took effect on August 31, 2015⁵. While the CCEYA replaced the DNA, it carried over many of the existing regulations. With respect to nutrition regulation, the existing regulatory framework was maintained with additional categories addressing allergies, special dietary needs and special feeding arrangements and the “Eating Well with Canada’s Food Guide—First Nations, Inuit and Metis” was recognized as a nutritional framework.

The advent of full day kindergarten in Ontario.

While the day nursery setting was being maligned as a manifestation of communism, education for children of the same age in the nursery school setting was lauded as the foundation for western-style democratic citizenship. Like child care programs, the institution of kindergarten programs on a province-wide scale in Ontario coincided with the post-WWII era and the dawn of the Cold War. Prentice (1989) explains that the Board of Education’s move to support the implementation of a half day junior and senior kindergarten⁶ program coincided with the turn to identifying childcare with communism and a belief that a “good nursery school [kindergarten] is the maker of young democrats.” (Toronto Star, September 30, 1949) At that time, “the ultimate goal of child study experts was to ensure that all children enjoyed a quality *part-day* nursery

⁵ Consistent with an approach to early childcare, in September 2017 the Ontario Government released a Renewed Early Years and Child Care Policy Framework. There is no specific mention of food or eating environments in this document.

⁶ In Ontario, children enter junior kindergarten the year that they turn 4, so children with birthdays in September, October, November and December are still 3 years old when they start kindergarten.

school experience for maximum personal growth and development.”(emphasis added, Prentice, 1996) In the context of the moralizing view of women’s role as wives and mothers outlined above, “experts walked a tightrope, claiming on the one hand that quality nurseries were a crucial part of child enrichment, yet simultaneously combating the public perception that full-day child care should be opposed.” (Prentice, 1996) While a great deal changed in the ensuing decades, the half-day model of kindergarten persisted in Ontario until very recently and findings from the 2009 Early Learning report suggest that this delineation disproportionately impacted low-income families in a negative way (Pascal, 2009).

Full day kindergarten (FDK) is a relatively new program in Ontario, with its creation drawing on evidence-based research throughout the 1990s that demonstrated that mixed age groupings led by interdisciplinary teaching teams offer an effective way for children in their early years to bridge their experiences from childcare to school (Burke, 1997; Katz, Evangelou, Hartman, & National Association for the Education of Young Children., 1990; Metro Task Force on Services to Young Children and Families, 1997; Neuman, 2002). The first Early Years Study (1999), commissioned by the Ontario Children’s Secretariat, is widely recognized as having popularized the science of early childhood development and is heralded for recommending public policy that supports children and their families during this critical life stage (Pascal, 2009). Since then, projects in Canada and around the world have used this vision to develop more cohesive programming for young children. In Toronto, Toronto First Duty (TFD) began in 2001 as a demonstration project to test a new model of service integration for early childhood programs (Corter, Janmohamed, & Pelletier, 2012) and contributed to a body of research showing that full-day programs support children’s successful transition to formal schooling (Pascal, 2009).

Prior to the advent of FDK in Ontario, there was a strong feeling of need for this type of approach with reports describing service provision in Ontario as “fragmented” (Pascal, 2009; Corter, Janmohamed & Pelletier, 2012) and citing Canada’s consistently low scores on international assessments of early learning and care (UNICEF *in* Pascal, 2009). Indeed, citing research demonstrating that “it is more difficult and more costly” to intervene later in a person’s life, Pascal (2009) outlined potentially dire outcomes for children:

More than one in four children enter Grade 1 significantly behind their peers. Too many never entirely close the gap and go on to be disruptive in school, fail to graduate, and are unable to fully participate in and contribute to society. Too many end up living lives of misery, harmful to themselves and others. (p. 4)

And, in the same vein, Dr. David Butler-Jones, then Canada’s Chief Public Health Officer, explained that a growing body of evidence demonstrates that some of the greatest returns on taxpayer’s investments are those directed at young people, ensuring a healthy start in the early years, thereby reducing “the long-term social costs associated with health care, addictions, crime, unemployment and welfare” and ensuring that “Canadian children become better educated, well-adjusted and more productive adults.” (Butler-Jones, 2008) Pascal’s 2009 report, *With Our Best Future*, lays out guidelines for the implementation of a community hub approach to full-day early learning in Ontario.

Among the relevant policy recommendations were continuity of care, options in length of day for children in the early years, staffing recommendations and recognition of the need to address food, nutrition and staffing at lunch. Pascal (2009) clarified that the proposal was *not* a so-called “wraparound” program where “children go back and forth between two distinct programs with different adults two to four times daily” because transitions are difficult for young children. Instead:

The Early Learning Program, whether attend for half, full or extended day, is a single program with a single pedagogical and curriculum planned and delivered by qualified educators using common space and resources. (p. 18)

The report specified that an early learning environment of *up to* 20 children would be staffed by a half time teacher and two certified early childhood educators (ECEs) to provide a “seamless program” for the children. With respect to lunch time staffing, Pascal clearly recommended that:

The schedules of the ECEs should overlap during the children’s lunch period to allow lunch breaks for the staff while maintaining a learning environment for the children. (p. 61)

Furthermore, the report noted:

Providing healthy meals and snacks as part of activities can be an effective, non-stigmatizing means to reduce child hunger. Equally compelling, food programs can address childhood obesity by promoting knowledge about nutrition and healthy food choices. (p. 19)

The report made other important recommendations regarding play-based learning, timely interventions for children, extended parental leave, the curriculum, parental engagement, and engaging Aboriginal families and offers a foundation against which to evaluate the success of the FDK program (Pascal, 2009).

The rollout of the FDK program began in the 2010/11 school year, reached all Ontario schools in the 2014/15 school year, and is the first of its kind in Canada (Ontario Ministry of Education, 2013). It has been recognized as a “bold” policy initiative that goes well beyond most other jurisdictions in North America (Pelletier, 2015). The rollout was guided by “The Full-Day Early Learning—Kindergarten Program *Draft Version*” (FDELK) (emphasis in original, Ontario Ministry of Education, 2011) and has now been replaced by the “Full Day Kindergarten Program” (Ontario Ministry of Education, 2016b). While media reports vary wildly in their support or condemnation of the program, research results find consistent areas of strength and weakness. The earliest evaluation of the first year of implementation identified challenges such

as teaching teams not being clear about what their roles were, ECEs being treated like Educational Assistants (EAs), teachers mistaking structured learning centres for play-based learning and parents' desire to be better informed about what transpires in the kindergarten classroom (Vanderlee, Youmans, Peters, & Eastabrook, 2012). The report also recommended that food programs to meet the nutritional needs of children be implemented in all FDK schools (Vanderlee et al., 2012). The evaluation report following the second year of implementation noted similar concerns, but also found pronounced improvement for "Ontario's most vulnerable students" and that "longitudinal findings suggest favourable outcomes for full-day kindergarten students in physical health and well-being as well as in cognitive and social development" (Ontario Ministry of Education, 2013, p. 17). And even more recent research has found that children in FDK showed more developed self-regulation than children in half day kindergarten and were ahead in vocabulary and literacy until Grade 2 when the study ended (Pelletier, 2015), even though the challenges facing teacher-ECE teaching teams and variable implementation of play-based learning persist (Pelletier, 2015; Underwood, Santo, Valeo, & Langford, 2016). Despite a lack of clarity regarding roles within teaching teams and understanding of the play-based learning approach, existing research points to benefits for children.

Nonetheless, to-date, the lunch hour has not been effectively addressed in either FDK policy or research. While the initial program outlined that children "need small amounts of food that are eaten at regular intervals" and, therefore, early-learning kindergarten teams should "provide regular opportunities for eating healthy snacks to promote physical health and well-being," there was no mention of the lunch setting whatsoever (Ontario Ministry of Education, 2011, p. 33). The two references to lunch in the full program (2016) are indicative of challenges relating to the lunch hour. The first reference appears in a list of "MISCONCEPTIONS about the

learning environment” (emphasis in original) and clearly states that it is a misconception that “the furniture should be arranged to facilitate whole-group activities, such as snack [and] lunch” (p. 37). The second reference appears as part of suggestions for how to deal with challenges and proposes that educators should talk to principals and ask, for example, if “there is a way to reduce the number of different educators that the children interact with... [including] lunchtime supervisors?” In both cases there is neither a proposed solution nor a set of best practices to address the challenges of facilitating mealtime settings or reducing the number of educators the children interact with over the course of their school day. Prior to this study, there had not yet been research on the impact of this policy gap in Ontario’s FDK lunchtime setting.

School food policy, or lack thereof, in Canada and relevant jurisdictions.

While there is strong evidence to support both the importance of a healthy diet in childhood and the suitability of the school as a setting to promote healthy eating and provide healthy foods, Canada, unlike similar states, has neither federal funding nor federal policy for student nutrition programs. This section first explores two explanatory models regarding Canada’s failure to implement a national school food program and addresses the challenges federal programming in this multi-jurisdictional polity. Additionally, this section addresses structural conditions at the federal, provincial and municipal levels relevant to this study, looking at federal and cross-country student nutrition research and advocacy, school food regulation and student nutrition funding in Ontario, and student nutrition programs in Toronto.

Canada: The Negative Case.

Given the extensive evidence demonstrating the substantial benefits of school food programs and the widespread existence of free or subsidized school food programs around the

world⁷, the question emerges, why does Canada have neither a national school food policy nor program? Rutledge, in her doctoral thesis (2009) and subsequent book (2016) on the emergence of school lunch programs, offers the following analysis on this subject. Describing Canada as “the negative case” (p. 149), because it did not follow the same trajectory as other, similar liberal welfare states (p. 102) in implementing student nutrition programs, either at the turn of the last century or in the aftermath of WWII, Rutledge argues that Canadian social policy “hid the issue of child poverty and thus precluded the possibility of voluntary organizations organizing around any frame that would elevate the issue of child malnutrition onto the national stage.” (2009, p. 151) Indeed, in his account of “Social Policy and Practice in Canada,” Finkel (2006) argues that the Family Allowance Act of 1944 was designed, in part, to encourage married woman, who had been called into the workforce during WWII, to return to the household. At the same time, the removal of federal daycare subsidies forced women back home (Finkel, 2006). Thus, according to Rutledge, Canada’s lack of a school lunch program can be explained by social policy in three ways: “mothers were expected to stay home and care for the children,” “family allowances were to be used by the family for the care of the child—absolving the government of any other care,” and “the existence of family allowances worked, at least initially, to gloss over the problem of child poverty.” (p. 155)⁸ She goes on to argue that it was not until the 1989 all party resolution calling for the elimination of child poverty by the year 2000 that child poverty appeared as part of the Canadian discourse (p. 156) and that it was after that a “charity frame” emerged to meet the needs of hungry Canadian school children (due to the lack of a national strategy) (p. 283), a model which dominated school food program approaches throughout the 1990s and early 2000s.

⁷ Children in 151 countries receive free or subsidized school food (Rutledge, 2016).

⁸ This policy paradigm eerily mirrors Harper-era federal policy which repealed daycare subsidy funding in favour of a \$100 per month Universal Child Tax Benefit. While the Trudeau government has increased these payments, similar issues remain.

Rutledge's account is consistent with Riches' argument in "Canada: Abandoning the Right to Food." (1997) Riches outlines the history of Canadian social policy and finds that, charitable initiatives emerged "as a result of the failure of governments to recognize and address the legislated rights of their country's poorest citizens to be able to put bread on their table" (p. 62). Historically, social policy has been driven by crisis—for example, concerns regarding the Great Depression led to the implementation of Unemployment Insurance, the Family Allowance, Old Age Pensions and Health Policy (in the Marsh Report 1943) and the Canada Assistance Plan (CAP) was born of post-WWII concerns.⁹ Riches (1997) explains:

universality, social insurance and selectivity in terms of cash benefits and social services became established as the key organizing principles of Canadian social programmes, and universal health care became an important symbol of national identity, particularly in terms of contrasting the more collectivist values of Canadian society with the of the individualism of its southern neighbour. (p. 60)

From 1966-1995 CAP was "a significant instrument in the struggle against hunger and poverty" and "reflected a period of co-operation between the provinces and the federal government in terms of developing and ensuring a guaranteed social minimum." (p. 60) Indeed, the gaps in both Rutledge and Riches' critiques of access to school food and the right to food, respectively, suggest that the CAP was a relatively effective tool for social welfare. That said both are critical of the fragmented charitable approach to food security in Canada. Where Rutledge discusses the need for a coherent school food program, Riches explores the depoliticizing effect of community altruism and finds that:

the country's continuing high rates of unemployment and child poverty and its mean-spirited and increasingly punitive welfare policies stand in stark contrast... [to] Canadians' perception that they live in a fair-minded and compassionate society (p. 74).

⁹ Similarly, Rutledge (2009) finds that in almost all cases it was "the shock of war" that finally led to the implementation of school food programs (p. 37).

Canada's failure to offer coherent national standards and funding for school food is an anomaly among the social welfare states and is incongruent with Canadians' perception of Canadian society.¹⁰

Challenges of a multi-jurisdictional polity.

That said, the structure of Canadian federalism presents a jurisdictional quagmire with respect to calls for a national school food program. In the Separation of Powers under the Constitution Act, both health and education fall under provincial and territorial jurisdiction. For this reason, an understanding of provincial regulatory frameworks is essential to an understanding of school food in Canada (Holmes, 2016; Martorell, 2017). At the same time, the Government of Canada provides "significant financial support" to provincial and territorial governments on an ongoing basis to "assist them in the provision of programs and services." (Department of Finance Canada, 2016) Specifically, the Canada Health Transfer and the Canada Social Transfer are federal transfers which "support specific policy areas such as health care, post-secondary education, social assistance and social services, early childhood development and child care." (Department of Finance Canada, 2016) Given that the areas where the federal government *already* provides "significant financial support" are all areas that intersect with the need for, the benefits of, and the outcomes of school food programs, it would seem that, while the issue is complex, intergovernmental agreements to support school food programs across three levels of government would not be inconsistent with the existing fiscal structure.

Federal and cross-country student nutrition research and advocacy.

¹⁰ While both Rutledge and Riches employ a food security analysis, these comments remain relevant with my broader assessment of wellbeing, as discussed later.

In fact, over the last few decades mounting concerns about diet-related disease in Canada have contributed to the growth of the current movement for a national school food program and to the shift from the charitable approach that dominated in the 1990s to the health approach which currently dominates. In 2005, health ministers committed to develop school nutrition standards and healthy eating programs under the “Integrated Pan-Canadian Healthy Living Strategy” (Intersectoral Healthy Living Network, 2005) and federal, provincial and territorial governments formed the “Pan-Canadian Joint Consortium for School Health” to “promote the wellness and achievement of health of children and youth in the school setting” (Joint Consortium for School Health, 2018). Two years later the Centre for Science in the Public Interest (CSPI) conducted a study to evaluate school nutrition policies across Canada based on “Canada’s Food Guide” (2007) and the US Institute of Medicine’s “Nutrition Standards for Foods in Schools” (2007). The results were poor—the highest grade was a B for Alberta’s draft guidelines, none of the territories had any standards, and Ontario received an F (Leo, 2007). Indeed, the report noted that “despite some particular strengths of certain school nutrition criteria, such criteria in Canada—where they exist—comprise a patchwork quilt of often weak, inconsistent guidelines.” (p. 13) That same year then MP for Trinity-Spadina in Toronto, Olivia Chow, put forward the Children’s Health & Nutrition Initiative (CHNI) as part of a coalition including FoodShare, Breakfast for Learning and CSPI. The CHNI called “for a nutritious breakfast, snack or lunch to be available to any Canadian child under eighteen years of age in the form of nutritious food programs” and asked that the Federal government “develop national program standards for healthy foods, with an emphasis on nutrition education, cooking and growing skills, and inclusion of locally and sustainably sourced foods” with an estimated cost of “\$1 to \$2 per day per child, depending on regional food prices, volunteer time, parental contribution, local fundraising, charitable donations and availability of cooking facilities.”

(Chow, 2007). To date, there is nothing of the kind, though just this spring Senator Art Eggleton (2018) put forward a motion to urge the government to initiate consultations with various groups to develop an adequately funded National cost-shared universal nutrition program (Senate of Canada, 1st Session, 42nd Parliament, Vol. 150, Iss. 221, June 14, 2018).

In recent years the federal government has commissioned several studies regarding the issue of child obesity, a growing health concern that is now consistently cited in calls for a national student nutrition program. These studies include, “Healthy Weight for Healthy Kids” (House of Commons Canada, 2007), “National Dialogue on Healthy Weights” (Ascentum, Public Health Agency of Canada 2011), and “Obesity in Canada” (Navaneelan & Janz, 2014; Public Health Agency of Canada & Canadian Institute of Health Information, 2011) and the Public Health Agency of Canada has offered grants to help support healthy eating interventions in schools as part of its Innovation Strategy. Additionally, civil society and research efforts have continued. In 2009, the Centre for Science in the Public Interest called for a national school meal program for Canadian children, arguing that such a program would be consistent with existing political commitments and is sound public policy. In 2015, the Heart and Stroke Foundation, Farm to Cafeteria Canada and Equiterre collaborated in hosting Canada’s first ever national school food conference bringing together over 400 people from diverse sectors from across the country and that same year Food Secure Canada’s Coalition for Healthy School Food, then comprised of over 30 organizations from across Canada, released a position paper calling for a national universal healthy school food program (FSC, 2015). Nonetheless, all mention of school food during the federal government’s 2017 public consultations for a national food policy came from outside actors.

School food regulation and student nutrition funding in Ontario.

In the province of Ontario, the issue of school food is addressed by the Ministry of Education, the Ministry of Health and Long-Term Care and the Ministry of Child and Youth Services. Within the Ministry of Education, Bill 8, the “Healthy Food for Schools Act, 2008”, is legislation regulating trans fats in foods available in the school setting (see Appendix A) and Policy/Program No. 150 (PPM150) “School Food and Beverage Policy, 2010” is the policy that regulates food sold on school premises (see Appendix A) all of which is further regulated under Regulation 562, “Food Premises, 1990” under the Health Protection and Promotion Act. Parents have been critical of the fact that the healthy food requirements of both Bill 8 and PPM150 may be exempted on “special event days” (Munter & Murumets, 2013). At the same time, in PPM150 the Ontario government clearly commits to “making schools healthier places for students” so that students can reach their potential.

The PPM150 policy document notes that a “healthy school environment enhances student learning and success, and enhances students’ social and emotional well-being,” citing American research outlining the connection between health and education and the lifelong importance of developing healthy eating habits in childhood (Ontario Ministry of Education, 2010a). Foods and beverages that “contain few or no essential nutrients and/or contain high amounts of fat, sugar, and/or sodium” are not permitted for sale, items that “contain slightly higher amounts of fat, sugar and/or sodium” can make up to 20 percent of foods and beverages sold, while a minimum of 80 percent of foods and beverages must be healthier options. Unfortunately, because there is no province-wide school food provision, the policy is limited to setting standards for food and beverages sold in publicly funded elementary and secondary schools.

Additionally, regulations pertaining to the lunch hour itself remain absent in policy and program requirements. In fact, echoing Rutledge's (2009; 2016) description of Canada's lack of a school food policy as driven by a policy to push women in the post-WWII era back into the home, parents of elementary school aged children are today expressly requested to take their children home for lunch:

If possible, students should go home for lunch. It is a great opportunity for exercise, plus children benefit from eating in a quiet, calm setting as it helps prepare them for afternoon learning. (web site withheld for reasons of confidentiality)

On the one hand this suggests that staff may be aware that the school lunch setting does not offer a "quiet, calm setting" that prepares students for afternoon learning. On the other hand, given Statistics Canada's finding that women's employment rate rose from 47% to 69% from 1976 to 2015 (Statistics Canada, 2016), the failure to regulate the lunch environment for young children based on the expectation that children will "go home for lunch" in order to "benefit from eating in a quiet, calm setting" so they can be prepared for learning is conspicuously out of step with reality.

Both the Ministry of Health and Long-Term Care and the Ministry of Child and Youth Services (MYCS) are more proactive. For example, through its "Healthy Kids Strategy", the Ministry of Health and Long-Term Care calls for more. Citing research on the increase in childhood obesity since the 1970s, the Healthy Kids Panel recommends that Ontario establish a universal school nutrition program for all publicly funded elementary schools, leveraging existing school nutrition programs (SNP) and extending them to reach every child. The report goes on to suggest that these "programs should include learning about where food comes from and how it is grown, as well as the hands-on experience of cooking and access to healthy foods for those coming to school hungry." (2013, p. 37) The Ministry of Child and Youth Services,

recognizing that “nutritious foods help kids learn”, “offers school aged children and youth nutritious food through breakfast, lunch and snack programs” by supporting 15% of the overall cost for programs which existed prior to 2008 and 15% of the cost for food for breakfast and morning meal programs in “designated communities.”¹¹ (de Wit, 2012) While funding is available for up to 15 per cent of an eligible program (de Wit, 2012), in practice this means that the province provides \$0.08 per child per school day (Martorell, 2017). Across the province these funds are dispersed through fourteen lead agencies which oversee program administration and grants, support fundraising, work to develop program sponsors and work with community partners to support local programs. In Toronto, the MCYS Student Nutrition Program is administered through the Toronto Foundation for Student Success.

Student nutrition programs in the City of Toronto.

In the city of Toronto, the very first student nutrition programs (SNPs) emerged in the early 1900s when Dr. Charles Hastings, then Toronto’s Medical Officer of Health, funded programs to distribute free milk in schools during his 1910-1929 tenure (de Wit, 2012). During his tenure, Dr. Hastings’ work earned Toronto a reputation as the “healthiest big city in the world” (Mah & Thang, 2010, p. 8). Today programs are run by students, parents and volunteers with support and oversight by Student Nutrition Toronto, a partnership which includes the TDSB, the Toronto Catholic School Board, their charitable foundations, the Toronto Partnership for Student Success (TPSS) and the Angel Foundation, Toronto Public Health and FoodShare Toronto, relying on funding from the province of Ontario (as outlined above), the City of Toronto, parent contributions, community and school-board fundraising initiatives, and corporate

¹¹ The use of “designated communities” is an approach designed to focus resources on those children likely to be most nutritionally vulnerable while avoiding the stigmatization caused when individual children and youth are targeted. In designated communities, student nutrition programs are universally available to all children.

donations (McKeown, 2015). The year this study was conducted, 2014/15, 712 SNPs were offered at 502 sites, serving 160,081 students, representing 45 percent of students in publicly funded schools in Toronto and the most recent municipal funding plan sought to extend funding to an additional 145 new programs serving over 46,000 more children and youth by the year 2018 (McKeown, 2015).

Because the research on the benefits of SNPs is very clear, the biggest challenge in both the most recent budget request from the Toronto Medical Officer of Health and the most recent report from Toronto Public Health is adequate, sustainable funding. The budget request advocated an increase from 14.16% of operating costs, or \$0.19, per elementary student per meal each school day in 2015 to 20% of operating costs in 2018 (McKeown, 2015), while the report outlined that even with 20% of funding from government, the average SNP would then need to fundraise an additional \$60,000 to operate for the entire school year, leaving programs in areas where there is the most need vulnerable to restricting output by limiting the numbers of days and/or months the program is available, limiting the quantities and the variety of food provided (de Wit, 2012). While these documents are programmatic reports that stress optimal use of minimal funds requires a focus on morning meal programs in designated communities with greater need, the Toronto Public Health report notes:

Schools provide an ideal environment to influence students' eating habits since students spend many of their waking hours at school. Furthermore, students are highly influenced by their peers, and hence healthy food habits can be reinforced at school. Commensality (the sharing of meals at a table) in schools also promotes the desirable benefits of improved social behaviour. (de Wit, 2012, p. 53)

Indeed, there is a tension between the pragmatic need to offer programming with the available funding while offering recommendations that meet the need. In fact, both reports underscore the

need for “adequate” government funding in their concluding remarks and clearly point to a universal program as best practice. To that end, on October 2, 2017, Toronto City Council passed a motion to “request [that] the Government of Canada... implement a cost-shared universal healthy school food program that would enable all students to have access to healthy meals at school every day, as advocated by the Coalition for Healthy School Food.” (City of Toronto, 2017) While the city strives to do as much as possible with minimal funding, ultimately the current City Council is overwhelmingly in favour¹² of a national school food program that would benefit all Canadian children and youth.

School Food Assessment

The purpose of this section is to outline the most relevant school food assessment literature and to identify the gaps. First, the three key areas of benefits from school food programs identified in a systematic literature review are described. Next, two key integrated program evaluation models are summarized. Third, the existing literature on school food environments is explored and, finally, research pertaining to eating in early childhood is discussed.

School food assessment categories.

Given the prevalence of student nutrition and school food programs globally, children receive government funded lunches in 151 countries (Rutledge, 2016), and there is an extensive body of assessment research. According to a systematic review of school breakfast programs in the United States, findings regarding the benefits of school food fall into three categories—cognitive and educational benefits, health benefits and behavioural and psychosocial benefits (J. L. Brown, Beardslee, & Prothrow-Stith, 2008). In the introduction, Brown, from the Harvard

¹² The motion passed 40 to 2, with 2 members absent (City of Toronto, 2017).

School of Public Health and founding director of the Centre on Hunger and Poverty, notes that “there is no ‘safe’ level of inadequate nutrition” for children and explains that children “who do not get enough to eat have poorer mental health” and they “also exhibit more disruptive behaviours and disciplinary disorders, require more counseling and other mental health services, and are more likely to need other special educational services.” (p. 3) Drawing on findings from over 100 published research articles, the authors detail the extensive benefits of school breakfast programs. With respect to cognitive and educational benefits, improved attendance and less tardiness; concentration, alertness and energy; overall academic performance; comprehension, learning and memory; and math, reading and standardized test scores (p. 8). Health-related benefits include better overall diet, better eating habits, improved nutritional status and reduced illnesses (p. 9). Finally, behavioural and psychosocial benefits include psychosocial well-being; discipline and social behaviour; and aggression and suspensions (p.11). Brown et al. go on to note that it is essential that programs be universal to avoid stigmatization (p. 12) and to explain that school breakfast programs are “one of the most cost-efficient things the nation can do to reduce hunger among children and to better their health and educational success” (p. 14). Within the Canadian context, a 2007 review of best practices in Ontario child nutrition programs found that “snack programs may be a more attractive model” due to higher participation rates (J. A. Russell, Evers, Dwyer, Uetrecht, & Macaskill, 2007, p. 122) though school breakfast programs remain popular (Godin, Kirkpatrick, Hanning, Stapleton, & Leatherdale, 2017).

Integrated program evaluation models.

While the benefits of a healthy diet in childhood are uncontested and the benefits of student nutrition programs are extensive and well documented, school food program evaluation remains complex precisely because so many factors are involved and so many areas are

impacted. As a result, integrated frameworks have emerged to both develop and evaluate school health and school food programs. Widely accepted models include, but are not limited to, the Health Promoting Schools (HPS) approach and the ecological framework.

Developed in the late 1980s, the World Health Organization's (WHO) HPS is "underpinned by the reciprocal relationship between health and education" (Rebecca Langford et al., 2015, p. 2) and has been applied around the world as a "whole school approach to promoting health" (Rebecca Langford et al., 2017, p. 463). In the Canadian context, the Joint Consortium for School Health (JCHS) endorsed the comprehensive school health (CSH) framework building the WHO's 1995 guidelines for health promoting schools (Stewart-Brown, 2006). The CSH framework is an "internationally recognized framework for supporting improvements in student's educational outcomes while addressing school health in a planned, integrated and holistic way." (Joint Consortium for School Health, 2008, p. 1) This model includes "four distinct but inter-related pillars"—social and physical environment; teaching and learning; healthy school policy; and partnerships and services (Figure 1) (p.1)—in an effort to recognize the interdependent nature of health and education. While this widely accepted model has its strengths, it is not without its weaknesses. For example, a recent study in Nova Scotia, Canada investigating student wellbeing and health behaviours at a health promoting school and a control school did not find statistically significant results (McIsaac et al., 2017) and systematic review found "unjustified" focus on some themes, like child obesity, and important gaps, like research in low-income settings (Langford et al, 2017, p. 469). Furthermore, there is no indication that any part of this approach explores the first-hand experiences of children in health promoting schools.

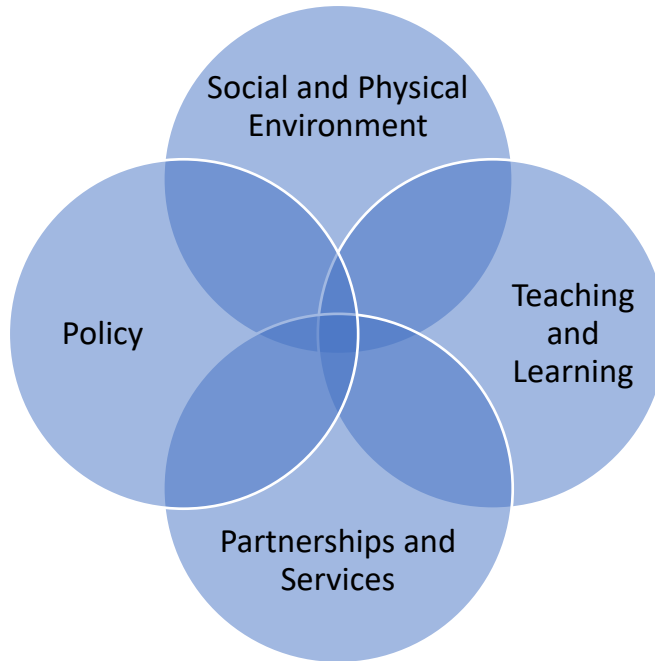


Figure 1: Comprehensive School Health Framework (Joint Consortium for School Health, 2008).

Somewhat similarly, recognizing that individual healthy choices can only occur within a supportive environment that offers accessible and affordable options, the ecological approach emphasizes multilevel linkages and the relationships between the multiple factors that impact health and nutrition. For example, as shown in Figure 2 (below) with a series of nested, non-concentric circles, individual factors are set within the social environment or social networks, which are set within the physical environment or setting which, in turn, is set within macro-level environments or sectors. In an article on creating healthy food and eating environments, Story, Kaphingst, Robinson-O'Brien and Glanz (Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008) note the paucity of well-articulated theoretical models to test the interactions between personal, social and environmental factors and stress the need to address the relationships between them. The authors, however, note that “surprisingly little has been written with respect to childcare

settings” (p. 254) and focus their analysis of the school eating environment on the food retail environment (though they propose improved nutrition education and farm-to-school programs) (p. 257-258). Like the HPS model, there is no indication of any consideration of children’s experiences whatsoever, even within the individual factors.

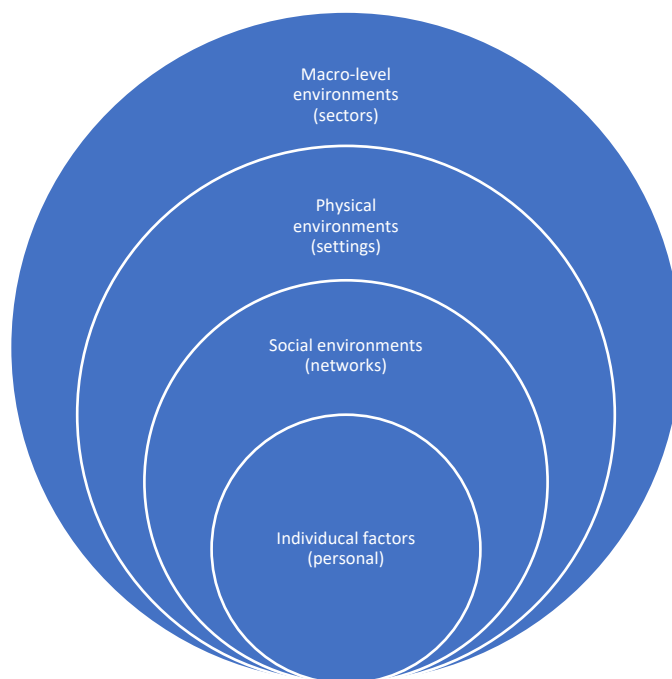


Figure 2: Ecological Approach (Story et al., 2008, p. C-1).

School food environments.

While significant proportions of the global body of school food research are, in fact program evaluations exploring the impact of the foods provided as part of student nutrition programs (as outlined above), there is a body of literature that specifically addresses the importance of the meal environment for children (Spurrier, Magarey, Golley, Curnow, & Sawyer, 2008; Stroebele-Benschop, Depa, & de Castro, 2016; Woodruff & Hanning, 2009), the impact of school food environments on children’s dietary habits (Briefel et al., 2009) and the relationship between parental influence, home meal environments, school meal environments

and children's eating habits (Boutelle, Birnbaum, Lytle, Murray, & Story, 2003; Ishdorj, Crepinsek, & Jensen, 2012; Krølner et al., 2009). This research, however, focuses primarily on the importance of the home meal environment, the school food retail environment (both within and around the school) and the interactions between the two. In fact, while there has been a proliferation of research on the school food environment, this research focuses almost exclusively on the food retail environment (Briefel et al., 2009; Glanz, Sallis, Saelens, & Frank, 2005; Missbach, Pachschwöll, Kuchling, & König, 2017; Terry-McElrath, O'malley, & Johnston, 2014). The nature of the environment where children eat at school is not addressed.

Comparable research in Canada also primarily explores the effects of the school food retail environment. Over the course of the last decade, all of the provinces have begun to regulate food sold in schools and the territories are now in the process of developing guidelines (Martorell, 2017). This has been necessary because in the mid-2000s numerous studies identified “concerns regarding the nutritional quality of foods in schools, including the ready availability of high-fat, high-sugar, low nutrient-dense foods and beverages, particularly in vending machines.” (Taylor, Jennifer ; Evers, Susan ; McKenna, 2005, p. S22) Nonetheless, three fundamental issues remain: first, are there, in fact, programs in place? Second, is the wider school environment regulated? And, third, if there are programs within a regulated environment, do they focus on the provision of quality food at an affordable price? In the case of Ontario, studies on the new regulations have found that the high cost of policy-compliant foods coupled with the proximity of non-compliant food environments has reduced the intended effects of the policy (Vine & Elliott, 2014b; Vine, Elliott, & Raine, 2014) and that a more comprehensive approach that includes social, environmental and educational components is necessary (Chaleunsouk & Kutsyuruba, 2014).

The school food literature offers the school as a setting to “promote a healthy diet” which raises the question of how to get children and young people to eat healthier foods in the school setting? The majority of the literature on school food environments in Canada pertains specifically to junior high and high school aged youth and the foods available for purchase both within the school and close by (Vine & Elliott, 2014a; Vine et al., 2014; Winson, MacRae, & Ostry, 2012). In fact, both the literature on school food environments and school food policy (Ontario’s School Food and Beverage Policy PPM150 is outlined below), like the literature cited above, assess and regulate the school food *retail* environment. Research and regulation regarding the actual school food environment, the physical and social spaces where children eat at school, remains conspicuously absent.

Eating in Early Childhood.

With respect to eating in early childhood, there is a paucity of systematic research exploring the impact of nutrition interventions for young children in group settings and a great deal of research on positive mealtime environments. In other words, those researchers working on food issues and healthy eating note a lack of research in early childhood settings whereas those researchers and practitioners in early childhood education address the mealtime environment as part of the continuum of the childcare day but there is an apparent lack of communication between the two fields. As noted above, Story et al. (2008) state that while “child care facilities provide a valuable opportunity to promote healthy eating and energy balance in children... surprisingly little has been written regarding child care settings.” (p. 256) Similarly, citing 6 studies, Larsen et al. (2017) describe a “lack of systematic research evaluating the effectiveness of nutrition interventions among preschoolers and kindergarteners.” (p. 36)

At the same time, outside the school setting, for decades research has evaluated the impacts of eating strategies on children. In the 1980s studies demonstrated that foods eaten instrumentally in order to obtain external rewards become more disliked (Birch, Birch, Marlin, & Kramer, 1982) with the effect that “control strategies can work in opposition to the establishment of nutritionally sound food acceptance patterns in children.” (Birch, McPhee, Shoba, Steinberg, & Krehbiel, 1987, p. 303) Related recent research explains that forced consumption imposes social conflict in which the forcee then associates lack of control and helplessness with a previously rejected food (Robert Batsell, Brown, Ansfield, & Paschall, 2002). Other recent research exploring effective strategies to promote healthy diets among young children demonstrates the efficacy of adult and peer modeling, family-style meal settings, sequencing foods offered, and offering children agency (Kok, 2015; Mita, Gray, & Goodell, 2015). In fact, as early as 1980, research demonstrated that younger children are more affected by peer modeling than older children and that children are more likely to eat a novel food when an adult models eating the food, rather than simply offering it to them (Birch, 1980). The use of the modeling contributes significantly to the promotion of a family-style mealtime approach in “Building Mealtime Environments and Relationships: An Inventory for Feeding Young Children in Group Settings” (BMER) (Fletcher, Branen, & Price, 2005), widely recognized as the optimal inventory for assessing the efficacy of strategies to feed children ages 2 to 5 years old in group care settings. Furthermore, research has demonstrated that “intake of healthier foods can be promoted by increasing portion size [of healthy foods], especially at the beginning of the meal” (E. L. Gibson et al., 2012) in a technique now referred to as “sequencing” and that offering children agency, for example, involving children in the design of produce promotion materials, increases the portion of produce children consume (Gustafson, Abbey, & Heelan, 2017).

Research has demonstrated that “the creation of a positive mealtime environment can positively influence healthy eating habits in children” (Mita, Gray & Goodell, 2015, p. 38). As a result of this kind of research, the Childcare Research and Resource Unit of Childcare Canada advocates the use of a “family-style meal” or “pedagogical meal” to offer young children both nutritional and language opportunities, along with a chance to “develop table manners, attitudes towards food, self-esteem, independence and learn cultural norms.” (2011, p.1)

Whereas for school aged children there is a wealth of literature assessing the efficacy of nutrition interventions and a lack of literature exploring the eating environment itself, for pre-school aged children there is a relative paucity of literature exploring the impact of nutrition interventions and accepted standards for implementing positive mealtime environments in group settings.

Child Wellbeing

Interest in child-centred conception of child wellbeing is both novel and closely tied to critiques of psychology and developmental psychology. This section, therefore, briefly outlines Burman’s seminal work, *Deconstructing Developmental Psychology* (1994), traces the emergence of contemporary notions of child wellbeing and points to models that employ child wellbeing in school evaluation.

Deconstructing developmental psychology.

In *Deconstructing Developmental Psychology*, first published in 1994, Erica Burman outlines the colonial underpinnings of traditional psychology, dominant models of developmental psychology and the ways in which these disciplines reproduce discourses of

oppression concerning gender, racism, ablism and other forms of oppressive practice. Her analysis “points to developmental psychology as a key technical knowledge mobilized by social policymakers to assess and mould children as future worker citizens.” (2015, p. 73). In other words, Burman argues that traditional developmental psychology is an instrument of power, in a Foucauldian sense. At the same time, Burman is optimistic about emergent opportunities. In a recent article, Burman summarizes five current opportunities for engagement and intervention—a new focus on children’s participation and engagement, attempts to ‘give voice’ to children, linking notions of child development and international development with limiting notions of progress, a shift towards recognizing children’s diverse developments, and ongoing work to counter ‘child fundamentalisms’ and normative definitions (2015). Ultimately, Berman’s work opens the assumptions and practices of traditional developmental psychology up for questioning and offers space to more attentively listen to children and recognize difference.

The emergence of contemporary child wellbeing.

While concerns regarding child wellbeing are not new, the contemporary understanding of child wellbeing is of a wholly different character than previous iterations. Indeed, previous attempts to attend to child wellbeing were based on a view of the child as both deficient (Burman, 2016) and as a potential “redemptive agent, able if given the right start to rescue society from its problems.” (Moss & Dahlberg, 2008) This approach can be seen in both Canada’s residential schools for Indigenous children and in missionary and development school projects around the world in impoverished areas. Concerns about actually monitoring the situation of children became more common at the dawn of the era of development in the wake of WWII and monitoring efforts are widely recognized to have begun in earnest with the UNICEF

State of the World's Children report in 1979 (Ben-Arieh & Goerge, 2001) though this early work treated children as “objects of concern” rather than as agents in their own lives (Hill, Laybourn, & Moira, 1996). Writing in the mid-1990s, Hill, Laybourn and Borland note that while studies of children had already had a long history in psychology, these had been “investigations *on* rather than *with* children” and that until the mid-1990s sociology had “largely ignored pre-adolescent children.” (1996) At the same time as Burman (1994) and Dahlberg, Moss and Pence (1999) were calling for developmental psychology and early childhood education to listen to children, so too, quality of life researchers began to argue that children “should have opportunities to exercise influence in discussions which concern them.” (Hill, Laybourn & Borland, 1996)

Since that time, a move toward accountability-based policy and the UN Convention on Rights of the Child (CRC) have been credited with growing attention to measuring and monitoring children's wellbeing as reflected by children themselves (Ben-Arieh, 2005; Ben-Arieh & Goerge, 2001; Land, Lamb, Vicki, & Mustillo, 2001). At the same time, advancements in positive psychology have contributed to an approach which emphasizes positive attributes in order to understand the “core elements of well-being that enable children to flourish and thrive.” (Pollard & Lee, 2003) Ben-Arieh (2005), Fattore, Mason and Watson (2007), and Crivello, Camfield and Woodhead (2009) attribute this to four recent key shifts in thinking about children's wellbeing—from a focus on survival to wellbeing, from negative to positive, from traditional to new domains, and from focusing on preparing for adulthood (or well-becoming) to focusing on the present lives (or wellbeing) of children. The challenge is that while there is now extensive literature on the wellbeing of adults, to date there is far less research on wellbeing in childhood (Gadermann et al., 2016). The literature that does exist places the contemporary child wellbeing and child indicators research firmly within a framework of children's empowerment

(Gadermann et al, 2016) and promotes an interdisciplinary and holistic view of children's experiences to inform more effective interventions (Crivello et al., 2009). This research seeks to understand the resourcefulness, resilience, optimism and agency that children have even in difficult contexts, (Crivello et al., 2009) and, like the critical work cited above, this approach calls for listening to children and engaging them in processes of meaning making.

Wellbeing in schools.

This turn towards recognizing children as actors in their own lives and directly conducting wellbeing research also influenced the range of approaches for evaluating the school setting. In their seminal work on wellbeing in schools, Finnish scholars, Konu and Rimpella (2002) found the existing approaches to school development programs—the effective school approach, the quality school approach, the health promoting school approach and the comprehensive school health program—wanting and, despite the promise of being comprehensive, excessively prone to reductionism and traditional health interventions. Pointing out that the World Health Organization's (WHO) definition of health refers to social and psychological wellbeing, Konu and Rimpella advocate the use of Finnish sociologist Allardt's concept of welfare¹³ or wellbeing as a model. Allardt's notion of wellbeing includes: having, which refers to material conditions; loving, which describes people's need to relate to one another; and being, which expresses the need for personal growth. Interestingly, though Allardt assigns health to the category of having, Konu and Rimpella create a fourth category in their school wellbeing model called health, possibly as a reflection of the health focus of previous models. Their model for wellbeing in schools highlights the importance of the physical environment in and around the school in the having domain, of positive relationships with staff and peers in the loving domain, of self-

¹³ In Nordic languages, the word welfare also stands for wellbeing (Konu & Rimpella, 2002).

fulfillment and decision-making in the being domain, and of the absence of disease and illness in the health domain.

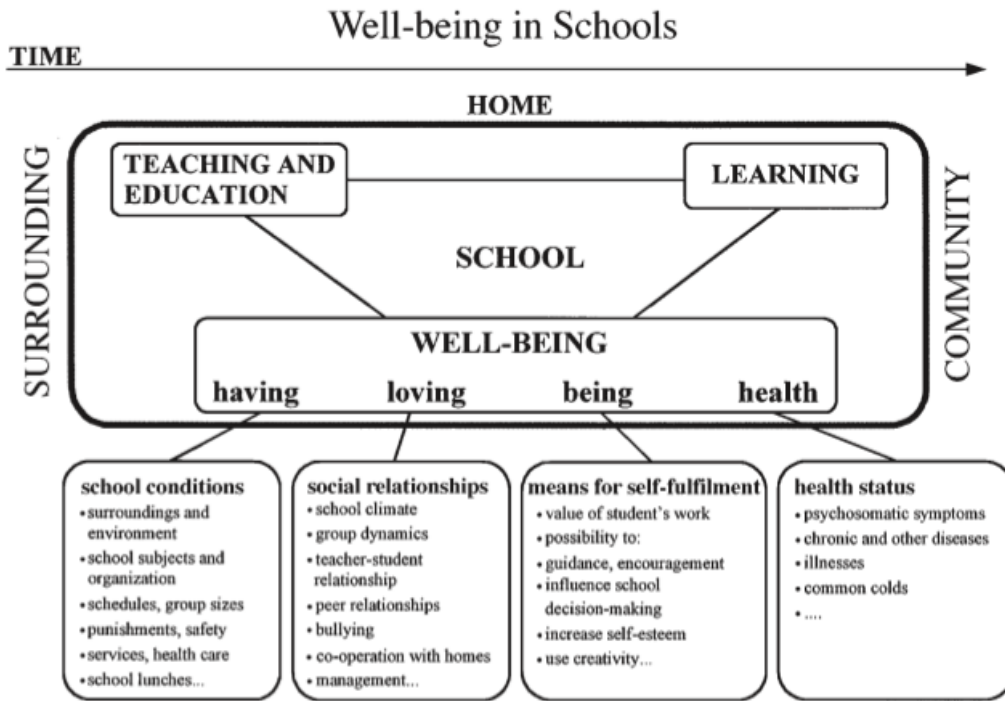


Fig. 1: The School Well-being Model.

Figure 3: Conceptual model for well-being in schools (Konu, Alanen, Lintonen, & Rimpelä, 2002).

In recent years, applications of wellbeing models in school settings have become common.¹⁴ Of particular relevance to this study, in 2011 the Ontario Ministry of Education released a Student Well-Being Research Framework drawing on the work of Ben-Arieh, Ryan and Deci, Pollard and Lee, and Konu and Rimpella. The Student Well-Being Research Framework includes three domains—physical, cognitive, and psycho-social—across three levels

¹⁴ For example, there is extensive research on student wellbeing in Australia (Anderson & Graham, 2016; Simmons, Graham & Thomas, 2015; Soutter, O'Steen & Gilmore, 2014; Clement, 2010).

of analysis—the student, the classroom, and the school (2011a) (Figure 4: Student well-being research framework). The following year the Ministry announced that it was initiating a support and monitoring plan to “assess the uptake of student well-being programs¹⁵ within schools” (Connor, 2012) and in 2014 the Ontario Ministry of Education’s Renewed Vision for Education in Ontario listed promoting well-being as one of the four key goals for education¹⁶ (Ontario Ministry of Education, 2014). Two years later the Ministry released its Well-Being Strategy for Education (Ontario Ministry of Education, 2016a). Interestingly, whereas the research-based Student Well-Being Research Framework (2011a) offered three domains—physical, cognitive and psycho-social—the Well-Being Strategy (2016a) adds a fourth domain—emotional—which is more commonly understood as an outcome of wellbeing in eudemonic models, without offering a rationale for the inclusion of this domain. In addition, the Strategy adds the notion of self or spirit at the core. Based on this most recent model, the Ministry conducted a province-wide school wellbeing assessment which found that students value being connected, being able to engage in meaningful learning, having positive relationships with peers and caring adults, and need to be equipped to make healthy choices (Ontario Ministry of Education, 2017).

¹⁵ The memo cites 7 government programs and policies designed to promote wellbeing in school: Daily Physical Activity (PPM138), 2005; Sabrina’s Law—An Act to Protect Anaphylactic Pupils, 2006; Foundation for a Healthy School framework, 2006; Healthy Schools Recognition Program, 2006; Support for the Life Saving Society’s Swim to Survive Program; School Food and Beverage Policy (PPM150), 2011; Trans Fat Standards Regulation, 2008.

¹⁶ The other goals are achieving excellence, ensuring equity and enhancing public confidence (2014).

Table 1: Student well-being research framework (Ontario Ministry of Education, 2011a).

STUDENT WELL-BEING RESEARCH FRAMEWORK

Student Well-being Indicators	<i>Level of Analysis</i>		
	Student Measures	Classroom Measures	School Measures
Physical	<ul style="list-style-type: none"> • Physical Activity • Health Status • Safety 	<ul style="list-style-type: none"> • Organization • Size • Condition 	<ul style="list-style-type: none"> • Environment • Surroundings • Equipment
Cognitive	<ul style="list-style-type: none"> • Student Achievement • Engaged on Topics of Interest 	<ul style="list-style-type: none"> • Good Teaching • Value of Student Work • Guidance 	<ul style="list-style-type: none"> • Quality Programs • Leadership
Psycho-social	<ul style="list-style-type: none"> • Relationships (Resilience) • Self-Esteem • Emotional Regulation 	<ul style="list-style-type: none"> • Encouragement • Feedback 	<ul style="list-style-type: none"> • Climate/Culture • Relationships • Group Dynamics • Early Identification

Key Terms: Definitions that Emerge from the Literature Review Above and Help Frame the Research Approach

In order to address the theoretical questions:

- can wellbeing be used to evaluate policy regarding eating environments in care settings?
- and, can young children meaningfully participate in wellbeing assessments?

and the empirical questions:

- how do children’s experiences of eating in the school environment compare to their experiences of eating in the childcare setting?
- and how do school eating environments impact the wellbeing of children in the FDK program?

it is essential to define some of the key terms.

Early childhood education.

The Atkinson Centre for Centre for Childhood Development's "Early Childhood Education Report 2017" defines early childhood education as "programs for young children based on an explicit curriculum delivered by qualified staff and designed to support children's development and learning" and notes that early childhood education "includes care, but also school operated kindergarten programs, as well as Aboriginal Head Start and parent and child programs." (Akbari & McCuaig, 2017, p. 2)

Early childhood educator (ECE).

In Ontario, only members of the College of Early Childhood Educators can use the protected titles and designations "early childhood educator" (ECE) and "registered early childhood educator" (RECE). Furthermore, only individuals who have met the registration requirements of the College and hold a Certificate of Registration in good standing may practice the profession of early childhood education, as outlined in the Early Childhood Educators Act, 2007.

Childcare centre.

The Ontario Ministry of Education identifies four types of childcare—licensed childcare centres, licensed home care, unlicensed care, and kindergarten before and after school care. All licensed care is regulated under the Child Care and Early Years Education Act, 2014, which defines child care as "the provision of temporary care for or supervision of children" and a child care centre as a "premises operated by a person licensed under this Act to operate a child care centre at the premises." (Child Care and Early Years Act, 2014, S.O. 2014, c.11, Sched. 1, 2014)

In the City of Toronto, the municipal government assesses all licensed programs using the Assessment for Quality Improvement scale and posts the resulting quality ratings online.

Student nutrition program.

Student Nutrition Ontario-Toronto defines a student nutrition program (SNP) as a “program that offers healthy breakfasts, morning meals, snacks and/or lunches to students each school day.” (Huse, 2009) The Ontario Ministry of Children and Youth Services offers six program guidelines for student nutrition programs:

- 1) Offer vegetables and/or fruit with every meal and/or snack. Choose Ontario grown produce as much as possible.
- 2) A meal contains one serving from three out of the four food groups of Canada’s Food Guide, and must include at least one serving from the Vegetables and Fruit food group and one serving from the Milk and Alternatives food group. Improve the nutritional value of a meal by offering choices from each of the four food groups
- 3) A snack contains at least one serving from two out of the four food groups of Canada’s Food Guide, and must include at least one serving from the Vegetables and Fruit food group. Improve the nutritional value of a snack by offering choices from three of the four food groups.
- 4) Drinking water is always available and offered.
- 5) Be environmentally conscious. Use good food service practices by using reusable/recyclable dishes and utensils when possible. Minimize waste from food packaging and disposable items.
- 6) Practice safe food handling at all times. (Ministry of Children and Youth Services, 2016, pp. 6–7)

Food environment.

A recent report from the John's Hopkins Centre for a Livable Future outlined that a food environments “comprises both physical and social elements that can influence a population’s eating patterns.” (Misiaszek, Buzogany, & Freishtat, 2018, p. 5) Similarly, Toronto Public Health, in its Toronto Food Strategy 2016 Update, describes the food environment as “vast and varied,” noting that it includes “how people access food, and what food is available in their homes, schools, workplaces, community centres and retail environments.” (Coleman, McDowell, Yusuf, & Emanuel, 2016, p. 13)

School food environment.

While much of the school food environment literature does not explicitly define the term, there are some definitions. Welker et al. (Welker, Lott, & Story, 2016) describe the school food environment as “when and where children obtain food and the types of options available during the day” (p. 145) and Browning et al. (Browning, Laxer, & Janssen, 2013), writing about Food and Eating Environments in Canadian Schools, outline the ways that the physical and social food and eating environments shape the ways that Canadian children eat at school. With the exception of Browning et al., significant proportions of the school food environment literature focus almost exclusively on the school food retail environment. For this reason, for the purposes of this dissertation, the school food environment refers to the food retail environment that students encounter in, and around, their school, whereas the school eating environment refers to the places students eat while at school.

School eating environment.

The concept of the school-eating environment is both concrete and abstract. In concrete terms, the SEE refers to the material conditions available for the provision and consumption of food both at school and, for older children, in the area surrounding the school. This can include classrooms, lunchrooms, cafeterias and other spaces in the school where students eat during their school day.

The school eating environment also connotes the broader social and political environment that impact eating while at school. At the most immediate level, the school eating environment addresses the psycho-social element of wellbeing—the students’ relationships with peers, adults and food while consuming food at school. Beyond this are the relationships among the administrators, staff, mealtime supervisors and food providers at the school. The parents’ relationships with all of these actors are another important level—most children eat all, or nearly all, of their meals either with their parents or caregivers or at school—parents’ and caregivers’ attitudes (inward and outward) about food, in general, and school food, in particular, have a profound impact on the eating habits of young children. Finally, there is the broader political context of school eating environments—the trustees, the school boards, municipal and provincial governments, and, in some cases, outside actors like organizations running farm-to-school programs with salad bars, cafeteria options, garden programs and the like. Each of these relationships influences the school eating environment and may, therefore influence the wellbeing impact of the school eating environment.

Wellbeing.

It can generally be stated that a person enjoys high levels of wellbeing when their life is going generally well for them (Raibley, 2012). Furthermore, there is a growing body of research

supporting the application of wellbeing measures for public policy evaluation and a growing number of governments around the world are applying a range of wellbeing models for that purpose (Forgeard, Jayawickreme, Kern, & Seligman, 2011). For the purposes of this study, I will draw on my model for WB which proposes three main domains—material security, relationship and engagement—viewed as a Venn diagram with meaning at the core. This model is described further in the framework section that follows.

Framework

This study evaluates school eating environments based on how they impact wellbeing. As a graduate of both an Honour's degree and a Master's program in International Development Studies, I base my initial understanding that wellbeing is the ultimate goal of public policy on Amartya Sen's Capabilities Approach,¹⁷ as outlined in *Development as Freedom* (1999). Further study of wellbeing in the western context led me to develop a eudemonic model for wellbeing including the most consistently cited central components—material security, relationships and engagement, with meaning at the core¹⁸. Material security is a basic precondition for wellbeing; positive relationships are consistently cited as crucial for wellbeing; and engagement, whether in the “flow” of a challenging task (Csikszentmihalyi, 1990; Seligman, 2011) or within the social context (Helliwell, 2005), offers potential for self-realization or flourishing as in Aristotle, Sen and Seligman's notions of wellbeing. Meaning underlies the entire concept. As with Sen's articulation of the idea that development is about improving human capabilities so that people can “live the kinds of lives that people have *reason to value*” (1999, emphasis added), Waterman (1993) citing Tefler (1980) explains that “eudemonia embodies the idea, not that one is pleased with one's life, but that one has what is *worth* desiring and worth having in life.” (emphasis in original text) This raises the question of how to determine what one has ‘reason to value’. The answer may simply be that it is less important what one ascribes meaning to than whether a person is able to find meaning. Indeed, this may be most poignantly articulated by pointing to the extensive literature on the relationship between resilience and meaning-making among sufferers of trauma, even those who have suffered long-term early childhood trauma. It is those

¹⁷ Sen's Capabilities Approach identifies people's capabilities to function (rather than what they have in terms of income or commodities) as the central focus of wellbeing analysis.

¹⁸ Because my model is eudemonic (focusing on meaning and self-realization to evaluate functioning), not hedonic (focusing on feeling pleasure), positive emotion, or affect, is not among the domains.

individuals who are able to make sense of their experiences who demonstrate resilience (Park, 2010). Indeed, it is the very act of finding meaning itself that promotes wellbeing¹⁹. Quite simply, as scholar of education and human development Prilleltensky explains, “wellbeing is about having meaning in your life, having a sense of competence and mastery and deriving meaning from what you do.” (2010)

Critical Theory

Each of the theories that underpin the wellbeing model I developed and employ in this study emerges out of a critique of dominant evaluation models. Dahlberg, Moss and Pence (1999) are critical of the ways that the discourse of quality institutionalizes childcare and argue for the importance of treating children as individuals shaped by their own unique experiences. Sen, who finds that analyses of poverty and famines centred on questions of food supply are fundamentally flawed (1981), arrives at a theory that addresses the relationship between wealth and our ability to live as we would like (1999), and between capabilities and wellbeing (1993). Finally, Diener and Seligman (2004), founders of the school of positive psychology, a field critical of psychology’s emphasis on pathology, argue for the use of wellbeing to evaluate public policy because over a period of economic growth, depression and distrust have grown, signaling the need for new metrics. Each of these ideas is briefly elaborated below.

Early Childhood Education Evaluation.

¹⁹ One of the most singular first-person accounts of the role of meaning, comes in the form of psychiatrist Victor Frankl’s account of his experiences in concentration camps, including Auschwitz, where all of his family members, including his pregnant wife, perished. Writing upon his release, Frankl (2006) noted that “everything can be taken from a man [sic] but one thing: the last of the human freedoms—to choose one’s attitude in any given set of circumstances, to choose one’s own way... It is this spiritual freedom—which cannot be taken away—that makes life meaningful and purposeful.” (p. 66-67) And, by the same token, Frankl observed that “sudden loss of hope and courage can have a deadly effect” (p. 75). These realizations and observations which emerged in the horrific context of Nazi concentration camps hold true in contemporary contexts where meaning has been demonstrated to be essential for wellbeing, and wellbeing has been shown to have positive health effects.

In line with Berman's (1994) critique of developmental psychology and emergent focus on children's participation and attempts to "give voice" to children (2015), Dahlberg, Moss and Pence (1999) are critical of the discourse of "quality" in early childhood education. These authors note that quality is neither natural nor neutral and, as a result, cannot be taken for granted. Indeed, in a more recent article Moss and Dahlberg (2008), explain that the concept of quality "assumes the possibility of deriving universal and objective norms." (p. 4) 'Quality' then becomes an evaluation of how well a product or service conforms to these norms and is, thereby, a technology of normalization and an element of hegemonic globalization. Because the concept and language of quality cannot accommodate issues such as diversity and multiple perspectives, contextual specificity, and subjectivity, the authors advocate a participatory process of "meaning making" with children and other actors drawing on a principle of rigorous subjectivity and documentation. They describe many forms of documentation including field notes, work produced by children, and photographs along with discussion and dialogue about "everything with everyone" including teachers, auxiliary staff, cooks, families and administrators. Moss and Dahlberg (2008) are clear that "meaning making through documentation involves contextualized interpretations of actual practices and actual environments" and recognize that any phenomenon "has multiple meanings, that knowledge is perspectival, and that all the experience is subject to interpretation." Here the turn from disciplinary silos and traditional developmental psychology engages an approach that is multifaceted, recognizes difference and situates the search for meaning at its core.

Analysis of poverty and wellbeing.

Emerging from a critique of post-WWII western oriented development which sought to erase traditional cultures in a teleological drive for capitalist success²⁰, Sen (1999) argues that freedom should be the ultimate goal of development. Sen's earlier work demonstrated the absolute inadequacy of aggregate statistical models and, in an ongoing way, contributes extensively to the field of welfare economics, a field which seeks to evaluate economic policy based on its impact on wellbeing. He has gone on to elucidate his theory that the ultimate goal of development and public policy should be to foster both substantive and instrumental freedoms²¹ (1999), and to have his work form the basis for the United Nations (UN) Human Development Index²² (HDI) in 1990. Most succinctly, Sen²³ argues that "development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy." (1999) This, he argues, can only be achieved through a "foundational understanding of the process of development as the expansion of human capability to lead more worthwhile and more free lives." (1999) Sen's extensive work demonstrates that, at its core, development is about improving human capabilities so that people can "live the kinds of lives that people have reason to value" (1999) and not about increasing economic output. This, too, is in line with Burman (2015), who draws parallels between classical notions of child development and international development, arguing that just as international development has sought to impose a trajectory for development, so child

²⁰ This approach to development was most notably articulated in Walter R Rostow's, *The Stages of Economic Growth: A Non-Communist Manifesto* (1960).

²¹ Sen outlines 5 instrumental freedoms: political freedoms, economic facilities, social opportunities, transparency guarantees and protective security (1999).

²² The HDI evaluates development with a measure that incorporates health and education and is the most widely applied alternative measure.

²³ In "Development as Freedom" (1999), Sen builds on Aristotle's understanding of human flourishing arguing that "development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy" (14). Sen outlines that an emphasis on human capability, rather than human capital, leads to "the expansion of human freedom to live the kind of lives that people have reason to value" (295). Ultimately Sen posits that a person's ability to lead a good life is based on valued beings and doings, such as being healthy and having loving relationships, and this Capabilities Approach contributes to a new set of social indicators, including the United Nations Human Development Index which embodies this approach to wellbeing.

psychology has contributed to “child fundamentalisms” that impose a trajectory for child development.

Economic indicators versus wellbeing.

Similarly, Ed Diener and Martin Seligman²⁴, the editor for the Journal of Happiness Studies and the founder of Positive Psychology, respectively, argue that wellbeing should be the primary focus of policy makers (2004). Addressing the opposite end of the economic spectrum from Sen, these psychologists explain that despite steep increases in economic output in the first world over the previous decades, there has been no rise in life satisfaction and, in fact, rates of depression and mistrust have increased (2004). Unlike Sen, Diener and Seligman remain in favour of economic indicators in “the early stages of development,” though this is to support meeting basic needs and suggests a failure to consider basic needs and HDI approaches that address this issue. Despite this shortcoming, their research in the first world context remains important. Indeed, drawing on an extensive literature review, Diener and Seligman demonstrate that wellbeing improves productivity and correlates with better physical health, both outcomes sought by movements to improve school food environments, particularly student nutrition program advocates. In this early article, in addition to noting the importance of material security, the authors argue that the quality of people’s social relationships is crucial to their wellbeing, explaining that “people need supportive, positive relationships and social belonging to sustain well-being.” (2004)

²⁴ In “Beyond Money: Toward an Economy of Wellbeing” (2004), Diener and Seligman argue that “well-being should become a primary focus of policy makers” because, once basic needs are met, social relationships and work satisfaction emerge as key indicators for wellbeing which, in turn, produces positive outcomes like improved work performance and good health.

Around that time, Martin Seligman's theory on Authentic Happiness (2002) (2002) was based on positive emotions, engagement and meaning. In the ensuing years, Seligman revised his theory, arguing instead that Flourishing (2011) is built on positive emotions, accomplishment, positive relationship, engagement and meaning. His inclusion of both positive emotions and meaning in both models is interesting because the former might suggest a hedonic or pleasure-based approach while the latter reflects a eudemonic approach centered on self-realization and these approaches are typically understood to be fundamentally at odds with one another. Aristotle considered hedonic happiness to be vulgar and argued that, by contrast, "those needs that are rooted in human nature and whose realization is conducive to human growth" produce eudaimonia or wellbeing (Ryan & Deci, 2001). Furthermore, eudemonic theories maintain that neither all desires nor all outcomes that a person might value would necessarily yield wellbeing when achieved (Ryan & Deci, 2001). For example, increases in wealth that do not improve wellbeing (Diener & Seligman, 2004) and increases in choice that might seem desirable have been found to contribute to the epidemic of clinical depression affecting much of the Western world (Schwartz, 2004). This delineation between hedonic and eudemonic approaches is also elaborated by both Foregard et al. (2011) and Jayawickreme et al. (2012) who similarly advocate measuring wellbeing for public policy.

Wellbeing model

Flowing from this, this study employs a wellbeing model that builds on Burman's (1994) critique of developmental psychology (outlined in the literature review), Dahlberg, Moss and Pence's (1999) critique of the discourse of quality in early childhood education, and Sen's (1999) identification of capabilities and wellbeing as the ultimate goals of *any* process of development and draws on Diener and Seligman's (2004) work on wellbeing and Seligman's

work on flourishing (2011). The model is eudemonic rather than hedonic because it is a model focused on self-realization rather than simply feeling good and it includes three interconnected domains—material security, because basic needs must first be met, relationship, which has been demonstrated to be essential for wellbeing, and engagement, which is necessary for flourishing. Underlying each of these domains is meaning, which has been demonstrated to be critical to wellbeing and resilience in multiple contexts, including critical developmental psychology, which advocates greater recognition of children as actors in their own lives.

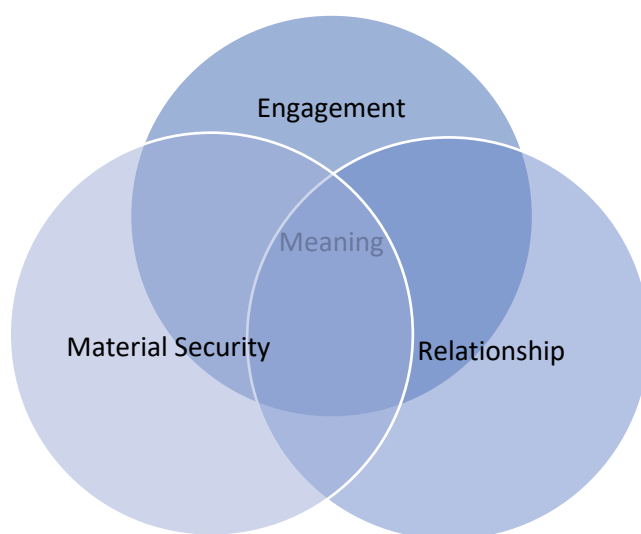


Figure 4: Wellbeing model.

Material Security.

Extensive research supports the importance of material security for wellbeing. While the language of needs and basic needs may be weighted down with linkages to debates regarding the Basic Needs Approach in international development, Basic Needs in Maslow’s hierarchy of needs and approaches to humanitarian aid, to name but a few, it would be difficult to contest that

some level of material security is a precondition for wellbeing. Indeed, in summarizing extensive research globally assessing the impact of socio-economic status on wellbeing, Ryan and Deci note that “there may be many risks to poverty but few benefits to wealth when it comes to wellbeing.” (2001, p. 154) Whereas Diener and Seligman (2004) focus extensively on multidirectional causal relationships between wealth and wellbeing (once poverty has been evaded), it is Sen who brings the issue into focus noting that wealth is not desirable for its own sake, but rather as a “means for having more freedom to lead the kind of lives we have reason to value.” (1999, p. 14) In the context of this study, the question of material security focuses attention on the physical environments where the children eat, the size and layout of the space, the volume during the lunchtime and the actual content of the lunches and snacks (see Coding Categories and NVIVO codes in Appendix D).

Relationship.

Similarly, the research on the essential nature of positive relationships for wellbeing is extensive and clear (Baumeister & Leary, 1995; Ryan & Deci, 2001). In fact, whereas the correlation between income and wellbeing is weak, relationships are understood to be critical to wellbeing (J. Henry, 2007). Indeed, one of the longest longitudinal studies of adult life, the Harvard Study of Adult Development, which has been running for over eight decades, has found that our relationships and how happy we are in our relationships have a powerful influence on our health. Simply put, the need to feel connected and to meaningfully relate to others is a core component of wellbeing generally (Deci & Ryan, 2014; Guardia, Patrick, Guardia, & Psychology, 2008; Reis, 2011) and is particularly important for children (Gadernann et al., 2016). With respect to this study, the relationship domain focused attention on peer relationships

among the child participants, staff to child relationships, staff to staff dynamics, researcher interference and type of staff training (see Coding Categories and NVIVO codes in Appendix D).

Engagement.

Engagement, on the other hand, may be viewed (by some) less as a critical requirement for wellbeing than as the element that is fundamental for self-realization. This is a eudemonic model which understands wellbeing as agential flourishing (rather than a hedonic model oriented towards episodic happiness). Because engagement involves taking an active interest in one's own life and being attentive (Raibley, 2012), it is essential for this model of wellbeing. Csikszentmihalyi's concept of Flow, the state in which a person is "so involved in an activity that nothing else seems to matter," (2008, 4) is the most widely cited example of engagement. Within this study, the engagement domain centred attention on moments when participants were deeply engrossed in an activity, drawing, interaction or task or alternately, when participants appeared distracted or bored (see Coding Categories and NVIVO codes in Appendix D).

Meaning.

As has been noted, meaning, whether it be finding meaning in one's life or making meaning in participatory research, is central to both wellbeing and to qualitative research. The importance of meaning is addressed throughout the wellbeing literature whether it be finding meaning (Frankl, 2006), acting on meaning (Henry, 2012) or retaining meaning (Seligman, 2011). In fact, meaning may be the most critical element of a eudemonic wellbeing model as it is the dimension that most intensifies the benefits of the other domains. For example, more meaningful relationships have a greater impact on wellbeing. The lens of meaning and meaning making was applied throughout the study.

Alignment with school food and school wellbeing assessment models.

The wellbeing model also aligns with assessment categories for school food²⁵ (Brown et al., 2008), Konu and Rimpella’s conceptual model for wellbeing in schools²⁶ (2001) and the Ontario Ministry of Education’s Student Well-Being Research Framework²⁷ (2011a) (Table 1). This alignment both demonstrates the relevance of the model itself and renders findings easily pertinent in other settings. In fact, while the Ministry of Education did update their model (subsequent to completion of fieldwork for the study), core student reports from the Ministry’s province-wide engagement on wellbeing align with the initial domains with students valuing being equipped to make healthy choices (physical or material security), being able to engage in meaningful learning (cognitive or engagement), and being connected, having a sense of belonging at school and having positive relationships with peers and caring adults (psychosocial or relationship) (Ontario Ministry of Education, 2017).

Table 2: Wellbeing model and existing assessment categories for school food.

My model for wellbeing	Assessment categories for school food	Conceptual model for wellbeing in schools	Student Well-being Research Framework
Material security	Health related benefits	School conditions & health	Physical
Engagement	Cognitive and educational benefits	Means for self-fulfillment	Cognitive
Relationship	Behaviour and psychosocial benefits	Social relationships	Psychosocial

²⁵ Outlined in the literature review (p. 27).

²⁶ Detailed in the literature review (p. 38-39).

²⁷ See literature review (p. 40-41).

Methods

This section outlines the methodological approach employed in this study, the research design, tools and process, and the analytic process. Consistent with the framework designed to evaluate children's wellbeing by listening to the voices of the children themselves, this study employs qualitative research methods. Specifically, the Mosaic approach (Clark & Moss, 2001) to participatory research²⁸ with young children forms the foundation of the study method. This approach is augmented by full day observations of the children in both their childcare centre and school settings, staff commentary, and parent surveys to enable triangulation of the child centred data. The child centred research is, in turn, supported with findings from key informant interviews in the field of early childhood education and instruction.

Methodological Approach

The Mosaic Approach was developed to “find practical ways to contribute to the development of services that are responsive to the ‘voice of the child’ and which recognize young children’s competencies.” (Clark & Moss, 2001, p. 2) The scholars who developed this approach built on two key pre-existing models. The first is Participatory Appraisal (PA) or Participatory Rural Appraisal (PRA), part of the movement of critical development theory mentioned above. PRA employed a Participatory Action Research (PAR)²⁹ approach to a model for development project design to empower non-literate adults in rural areas. The second is

²⁸ In participatory research, the researcher and participants collaborate to study and change the social reality of the participants (Bell et al., 2004).

²⁹ Informed by Paulo Freire's “The Pedagogy of the Oppressed” (1970), PAR has a double objective to both produce knowledge and action directly useful to a group of people and to empower people through constructing and using their own knowledge (Reason, 1994).

Pedagogical Documentation (PD), developed in the Reggio Emilia pre-schools in Northern Italy and introduced by Dahlberg, Moss and Pence in their influential work on critical early childhood education, “Beyond Quality in Early Childhood Education” (1999). PD is an iterative process in which teachers follow the progression of children’s thoughts and feelings through ‘visible listening’ in a way that they can at once become aware of the limitations of adult knowledge and sensitize their emotional response to, and affiliation with, young children (Carol Anne Wien, Guyevskey, & Berdoussis, 2011). Drawing on these two critical, empowerment-centred approaches, the Mosaic Approach is multi-method research whereby both children and adults can engage in “meaning-making” using children’s own photographs, tours and maps, along with talking (interviews) and observations (2001).

As noted in the child wellbeing section of the literature review, there is a long history of advocacy on behalf of children, but until recently little (if any) of this work has placed value on their day to day experiences, their being (rather than their becoming), or their own views. While the movement to include children’s voices grows, young children continue to be excluded in research, possibly due to concerns regarding reliability and response rates. In addressing research with elementary school aged children, Ben-Arieh (2005) concludes that studies directly involving children have yielded just as good, and even better, reliability and response rates than studies using adults to report children’s wellbeing. Additionally, Greene and Hill (2005), citing earlier studies, explain that there is very little difference between adults and children in terms of “memory loss and recall and both are helped by recognition aids.” (p. 10) Nonetheless, despite being a leading proponent for the inclusion of elementary school aged children in child wellbeing studies, even Ben-Arieh (2005) described pre-school aged children as “too young for serving as the source of information” (p. 582) based on studies conducted in the early 1990s. More recent

work, however, does not support this limitation. In fact, the Mosaic Approach (Clark & Moss, 2001) is also employed in Oxford University's prolific Young Lives Project—a 15-year project involving 12,000 children in Ethiopia, Peru, Vietnam and Andhra Pradesh (Crivello et al., 2009) that demonstrates just the opposite—young children can attest to their own wellbeing with methods adapted to their developmental stages. Research over the last decade and a half suggests that the challenge of doing research directly with young children is not, as has been suggested, that children are too young to serve as a source of information, but rather that adults remain reluctant to acknowledge the voices of this vulnerable group.

Work with children, especially young children, must be sensitive and is necessarily a time-consuming process. Clark and Moss (2001) outline the importance of taking time, being flexible and allowing children to feel in control—for example, allowing children to be interviewed with a friend, to choose the setting and the time, to choose whether or not to participate at every engagement—and making participation fun for the children. For children to feel safe, especially when expressing views that may be critical of an environment where the adults hold all the power, it is imperative that they have agency and are given time to develop comfortable interactions with the researcher. Offering children a variety of ways to express themselves over a period of time in settings where they are comfortable and know the researcher is what makes it possible for young children to participate. This is important because, as Prilleltensky argues, “children have powerful voices, but they will remain unheard until space for their expression are created and nurtured.” (2010a, p. 247)

The direct work with children was augmented with other qualitative methods including researcher observations, staff commentary and parent surveys. Participant observations³⁰ followed the relational method described by Tudge and Hogan's (2005) "Ecological Approach to Observations of Children's Everyday Lives." This approach is a contextualist-ecological approach which recognizes that "individuals and the context in which they are situated are explicitly linked". In this view, experience, contrary to being purely of the individual, "involves the individual and the interpersonal and broader cultural and historical context in which that individual is situated." (p. 104) This method, developed specifically to actively engage children ages 2 to 4 years old as participants (rather than objects of study) describes the process of "observing children engaging, in as natural a way as can be arranged, in the types of activities that would be a typical part of their everyday lives" as essential because the children can then "control what it is they do, when they do it, and with whom—at least to the extent that they are allowed by their social partners and pre-existing constraints of the setting." (p. 115) In many cases, on-site staff offered unsolicited commentary which provided the opportunity to understand whether or not the observation day was characteristic or atypical and, in some cases, to learn from staff observed history. This commentary was taken in context. Additionally, parent surveys provided demographic information, parent-observed food preferences and outlined parent concerns regarding the start of kindergarten. Finally, semi-structured key informant interviews helped to provide some of the broader context not available in the literature. Green and Hill (2005) underscore the importance of acknowledging the strengths and limitations of each

³⁰ Participant observation research is "research that involves the social interaction between the researcher and informant in the milieu of the latter, during which data are systematically and unobtrusively collected" (Taylor and Bogdan 1984 in Heinonen, 2013, p. 38).

source—the use of multiple methods and additional sources facilitates access to intersubjectively valid truths.

Design

As is outlined below, the design for this study went through several iterations. The first included three participatory stages in the school setting and was accepted by my Ph.D. supervisory committee but was not accepted by the ethics review committee at the Toronto District School Board. The second included an initial stage in childcare centres and a second stage either in the after-school setting or in the school setting and was accepted by all necessary actors. Unfortunately, permission from the school board came after the cohort of child participants had already begun junior kindergarten³¹. Consequently, the study was conducted in three phases—phase 1 in the childcare centre, phase 2 in the after-school care setting to engage with participants during their transition to kindergarten, and phase 3 in the school setting. This section outlines each of the proposals, the site and participant selection process, participant research evolution, each of the study phases and the key informant interviews.

Proposals.

The initial study design approved by my PhD Supervisory Committee (PSC) (see Plan A, August 13, 2013 in Appendix B) mirrored the approach described by Moss and Clark in “Listening to Young Children: The Mosaic Approach.” (2001) Plan A followed the mosaic approach’s three stage model: 1) gathering perspectives; 2) discussing the material; and 3) deciding on areas of continuity and change (Clark, 2005). In this model, in the first stage child

³¹ In the province of Ontario children begin junior kindergarten (JK) in September of the year that they will turn four years old. Children with birthdays between January and August (inclusive) are four years old when they begin (JK) and children with birthdays between September and December (inclusive) are three years old when they begin JK.

participants would have led a tour of their school-eating environment. As in the mosaic approach, the students would have had a camera to take pictures and would have had an opportunity to draw pictures. Both sets of images would have then be used by the students to map out their school-eating environment. This stage would have happened one-on-one and would also have involved data collection from parents and other actors in the school-eating environment. The second stage would have offered an opportunity to dialogue with the children about their images and maps. Clark notes that while “reflecting on meanings and reassessing understandings is implicit throughout the whole approach, ... the second stage allows a concentrated period of reflection.” (p. 15) This stage, too, would have been one-on-one. Finally, in the third stage, the child participants would have had the opportunity to come together, share their maps and discuss together ideas regarding what they thought would improve their school eating environment. At the time, the plan was to conduct these three stages over the course of the fall of 2013 and to revisit the child participants early in the winter and late in the spring of 2014 to discuss their evolving feelings about the school eating environment. The proposal developed in Plan A was for a participatory research project.

Additionally, Plan A included the parents of child participants, requesting that they keep a one-week photo diary of their child’s lunch bag before and after school³², answer a parent survey, and participate in a focus group with other study parents. Findings obtained directly from child participants and their parents would have been triangulated with field observations and key informant interviews. While the Mosaic Approach continues to gain recognition and momentum in early childhood research, the proposal was rejected by the TDSB Ethics Research Review Committee (ERRC) in October 2013 citing concerns relating to the very open and iterative nature of this participatory research approach. The nature of the ERRC’s concerns seemed to

³² ‘Waste free’ lunch policies mean that children bring home uneaten portions of their lunches.

render this type of child-centred research impossible in that setting because addressing their concerns would have undermined the core of this research process.

Over the course of the fall of 2013 I worked on an alternate model, or Plan B, as I continued to procure both Royal Canadian Mounted Police (RCMP) and Toronto Police Services (TPS) criminal record checks required of those working with vulnerable populations. On Wednesday, November 30, 2013 my PSC approved the new plan (see Plan B, Nov 30, 2013, in Appendix B). Plan B involved recruiting participants attending childcare centres housed in TDSB schools in the spring of 2014, who intended to attend junior kindergarten at the school where the childcare centre was housed. In this plan, phase one included naturalistic observations of child participants in the childcare setting during the spring of 2014, drawing on the model of Tudge and Hogan (2005). These authors draw on ecological theories to integrate psychological and sociological perspectives (p. 102) to generate a relational method appropriate for observations of children ages 2 to 4 years old that pays “attention to how children behave *in relation to others and their environment*” (p. 103). The plan was to observe three child participants per day for the length of a regular school day, using 10-minute intervals, and to offer the children the chance to draw a map or picture about eating in the childcare setting. The school component of Plan B reflected a reduced version of the structure of Plan A, eliminating all photographic elements and condensing all three stages into a single day. Plan B provided an option to exclusively work with child participants in their childcare setting, both before starting kindergarten and in the after-school care setting once they had started junior kindergarten, should the revised proposal be rejected by the TDSB’s ERRC. In the event that the proposal was accepted, Plan B offered the additional benefits of a cohort of children already adapted to eating with peers during full days away from their parents or primary caregivers and the opportunity to

compare the regulatory frameworks of the childcare eating environment with the school eating environment in kindergarten classrooms. On April 3, 2014, Plan B was approved by York University's Human Participants Review Sub-Committee.

Ultimately, the study was conducted in three phases, adapted to accommodate the TDSB's ERRC process. Phase 1 was conducted in the childcare setting at each of the three sites. Once recruitment was complete, the resubmission to the ERRC was developed. This second submission included approval from my PhD Supervisory Committee, ethics approval from the York University Human Participants Review Sub-Committee, criminal records checks from both the TPS and the RCMP, approval from Toronto Children's Services to research in childcare settings, approval from the directors of all three childcare sites and their supervisors or boards of directors, parent or guardian consent and verbal assent from child participants. Additionally, it eliminated both use of photography and child-led tours of the school environment and included no further recruitment of child participants. This submission was approved. Due to the fact that the ERRC does not meet over the summer and the lengthy nature of the process, approval was granted on November 27, 2014. In order to understand the children's experience of transitioning to full day kindergarten, an additional phase was developed. During phase 2, participants attending after school care were interviewed twice in the fall of 2014. Finally, throughout the winter and spring of 2015, phase 3 was conducted in the school setting (see Table 3).

Table 3: Study Phase Timing.

Phase	Timing
1	Spring and Summer 2014
2	Fall 2014
3	Winter and Spring 2015

Site selection and participants.

In an effort to consider sites that were comparable, initial site selection was guided by a range of publicly available data. Initial inclusion criteria, based on 2014 data were: 1) a geographic area bounded by postal code; 2) the school had to have a city-run childcare centre eligible for Toronto Children’s services subsidy (offering the potential for families of diverse economic security); 3) moderately high quality ranking of the childcare centres’ preschool rooms; 4) moderate Fraser Report rankings and Learning Opportunities Index (LOI)³³; and, 5) average parental incomes not more than \$5000 over the poverty line for a family of four. All 17 childcare-school pairings that met the first two criteria were considered for the study. Within this set, four childcare-school pairings met all five criteria. Two of these four childcare centres agreed to participate. The director of the third childcare centre was enthusiastic, but their supervisor declined participation for reasons not made clear to the director. Both the director and supervisor of the fourth childcare centre were enthusiastic but further investigation revealed a potential conflict of interest. At that time, the supervisor offered that another of the childcare centres they supervised would be able to participate. This alternate centre met four of the five criteria, but exceeded the average parental income stipulated during the first round of review (Table 4).

Table 4: Site selection criteria (2014 data).

Site	“Pre-school Room Daycare Quality Rating” (City of Toronto)	“School Ranking” (Fraser Institute)	“Learning Opportunities Index” (TDSB)	“Average parental income” at school (Fraser Institute)
Blueberry ³⁴	3.51/5	7/10	224	\$41,000

³³ The Fraser Report school rankings, produced by the Fraser Institute, provides a detailed report on how schools are doing in terms of academics and the Learning Opportunities Index (LOI), produced by the TDSB ranks schools based on measures of external challenges affecting student success including median income, percentage of families whose income is below the low income measure, percentage of families receiving social assistance, adults with low education, adults with university degrees and lone-parent families. With this study, I hoped to capture a generalizable sample at neither end of the spectrum. This publicly available data helped to select schools that were relatively average and similar according to these rankings.

³⁴ All site and participant names have been altered to protect the anonymity of child participants.

Raspberry	3.78/5	7.2/10	324	\$53,400
Huckleberry	3.68/5	7.2/10	394	\$72,000

Within each site, only children attending the childcare centre on a full-time basis and intending to attend the FDK program at the same school were eligible to participate. Recruitment involved spending time at each of the 3 childcare sites during the time most parents or caregivers picked up their children, being introduced to parents by staff, hand delivering an information letter, dialogue regarding the study, and subsequent visits with consent forms. Recruitment began at the Blueberry Childcare Centre in late April 2014 and by late May 2014 parents of 8 of the 11 eligible children had signed consent—3 had not consented and 3 were either part time or planning to attend other schools and were, therefore, ineligible for the study. The caregivers of the other 3 eligible children all spoke English as a second language—while materials were translated to the preferred language in each case and each of the children expressed a strong desire to participate, none of these caregivers offered consent. Recruitment at the Raspberry Childcare Centre began in early June 2014 where the parents or guardians of 5 of the 8 eligible children were quick to offer consent and the parents of the other 3 children expressed a lack of interest. The 8 other children in the preschool room were either too young or were planning to attend other schools. Finally, recruitment at the Huckleberry Childcare Centre began in early July 2014 where the parents of all 6 of the eligible children agreed to participate. Among the other 5 children, 1 was planning to attend another school and the other 4 only attended the childcare centre part time. Participation rates were 72.72%, 62.5% and 100% of eligible children at the Blueberry, Raspberry and Huckleberry sites, respectively, for a total of 20 participants at the inception of the study. Over the course of the study one child switched schools, one was not available for the third phase, one child declined verbal assent and another, who intended to change schools but returned, contributed to group participant interview data, such that ultimately

there were a total of 21 participants—17 for the full course of the study and 4 who participated in one or two thirds of it. Notes on each of the 21 participants are available in Appendix G.

Participant Research Evolution.

The study evolved based on understanding developed during its course. For example, in Phase 1 two participants were observed each day, each participant had one interview at the end of their observation day and all participants gave their self-reported wellbeing on the same day. In Phase 3, only one participant was observed each observation day to facilitate more detailed note taking. Additionally, participants gave their self-reported wellbeing in multiple interviews throughout their observation day. The age and developmental stage of the participants meant that in Phase 1 some had difficulties recalling activities and feelings from earlier in the day. In Phase 3 multiple interviews throughout the day made it possible to incorporate participants' perspectives regarding their experiences as they were happening. Additionally, study participants moved to define the meaning of each of the faces on the wellbeing chart themselves. Recording self-reported wellbeing along with interviews and observations offered a richer data-set that more completely captured the children's intended meaning in Phase 3.

Study phases.

Phase 1 involved full day observations of child participants in the childcare setting (see Fieldwork Dates Chart in Appendix C), child participant interviews, drawings, wellbeing charts and parent and guardian surveys. In their chapter on contextualist-ecological observation with child participants, Tudge and Hogan (2005) describe conducting lengthy observations so participants can become acclimatized to the observer's presence, but collecting data at intervals, using the remainder of the time to take field notes. Following this model, in phase 1 children

were observed for 5 of every 15 minutes for a full day (excluding nap time and toileting). Detailed field notes describing the participant's activities, interactions with peers and staff, attention and any visible signs of mood (for example, smiling or crying), energy level (for example bouncing or laying head on table) and attention level (for example, attentively following story time or fidgeting and turning away). On the majority of observation days, 2 children were observed each day. At the end of the observation day, in keeping with the Mosaic Approach, each participant had the opportunity to draw a picture reflecting their experiences of eating in the childcare setting. In addition, each participant was invited to participate in a semi-structured³⁵ interview in keeping with research that suggests that children are more likely to provide valid responses to open ended questions (Waterman et al., 2001 in Green & Hill, 2005), in order to glean more genuine responses. In addition, on a separate day each participant was invited to indicate how they were feeling on a wellbeing chart including five faces, a variant of the Wong-Baker Assessment Scale applied in measuring children's wellbeing (Garra et al., 2010; Thompson & Aked, 2009; Wong & Baker, 1988) (see Figure 5). Finally, during Phase 1 parents and guardians of child participants completed surveys including family demographic information mirroring the information reflected in the TDSB's census and their perceptions of their child's food and eating habits (See parent survey in Appendix C).



Figure 5: Wellbeing Chart.

³⁵ Research suggests that children provide more valid responses to open ended questions (Waterman et al, 2001 in Green & Hill, 2005).

In phase 2 participants had the opportunity to have a recorded interview in their after-school care site. These interviews, in September and October 2014, enquired about the start of junior kindergarten, what the differences between daycare and kindergarten are, and how the children felt about eating in kindergarten. For ten of the 17 full-study participants the after-school care program was run in their regular classroom, giving those children the opportunity to point to locations in the room as they recounted their experiences. All of the child participants had the opportunity to identify the faces on the wellbeing chart and to situate their feelings on this chart. One limitation to this model was the exclusion of participants who did not attend the after-school program (two at the Blueberry site and one at the Raspberry site). Many non-participants sought inclusion in the study during visits to the after-school care setting, but the parameters of the submission to the ERRC precluded this possibility. Also, during the fall of 2014, recruitment for key informant interviews and initial interviews were conducted.

Phase 3 was conducted throughout the winter and spring of 2015. Field work in the school setting required first seeking the approval of the principal, then seeking the approval of both the classroom teacher and classroom ECE in each classroom, confirming parental consent for each of the participants and providing information and advance notice to the parents of all non-participating children in each of the classrooms. This process was first completed at the Raspberry School, where fieldwork was conducted throughout the month of January 2015. Fieldwork at the Huckleberry School was initiated in the month of February and was completed in May 2015.³⁶ At the Blueberry School fieldwork was conducted in March and April 2015 (see Fieldwork Dates Chart in Appendix C). Phase 3 full day observations in the school setting mirrored phase 1 full day observations in the childcare setting with some modifications. In both

³⁶ A death in my immediate family in February and a contract faculty strike at my university in March (requiring 5 days a week of picketing) interrupted full day observations.

phase 1 and phase 3 participants were observed at intervals for 5 of every 15 minutes, though in phase 3 only one participant was observed per day permitting more detailed note taking and more time in each classroom overall. Additionally, whereas in phase 1 participants engaged in one interview at the end of the day and indicated how they were feeling on the wellbeing chart at 90-minute intervals on another day, in phase 3 participants were interviewed once every 90-minute interval and had the opportunity to indicate how they were feeling during these interviews. This provided more opportunities to interact with the child participants regarding their current feeling in a way that could be reviewed in the context of detailed field observations. Finally, in phase 3 the children had total control over describing the emotions pictured in the wellbeing chart, whereas in the phase 1 the process was discursive.

In Phases 1 and 2 in the childcare setting and after school care setting, respectively, all of the participants in a given site were in the same room together. For example, all participants at the Blueberry Site were in the same childcare centre room and the same after school care room. In Phase 3, by contrast, the participants were spread across eight classrooms—two at the Blueberry School, two at the Raspberry School and three at the Huckleberry School as outlined in Table 4. In order to protect the identities of the child participants, each participant has been assigned a letter code. The final letter in each participant letter code indicates the participant's site. For example, JB is a participant at the Blueberry Site, AR is a participant at the Raspberry Site, and NH is a participant at the Huckleberry Site. Because there was one full day observation per participant in Phase 3, those classrooms with more participants (for example, the East Classroom at the Blueberry School and the North-West Classroom at the Huckleberry School) were observed for more days than those classrooms with fewer participants (for example, the North-West classroom at the Raspberry School, the South-West classroom at the Raspberry

School, the North Classroom at the Huckleberry School and the East Classroom at the Huckleberry School each only had one participant).

Table 5: Participant distribution in kindergarten classrooms.

Site	Participants	# of full study participants	Total # of students in the class
East classroom Blueberry School	JB, MB, EB, LB	4	24
West Classroom Blueberry School	BB, OB, RB	3	27
North-East Classroom Raspberry School	AR, LR	2	33
North-West Classroom Raspberry School	KR	1	32
South-West Classroom Raspberry School	ZR	1	33
North-West Classroom Huckleberry School	NH, JaH, JoH, AH	4	14
North Classroom Huckleberry School	MH	1	28
East Classroom Huckleberry School	GH	1	28

Key informant interviews.

Key informant interviews were conducted between September 2014 and June 2017. Interviewees included early childhood education experts, the cook from the one study childcare center with an on-site kitchen, an early childhood educator (ECE) from the before and after school program at one of the sites, an OISE student-teacher with an ECE background, a TDSB kindergarten teacher with an ECE background, 4 TDSB kindergarten teachers, a physical health and education teacher in the TDSB, two special needs teachers in the TDSB and one parent with children who had attended FDK in multiple TDSB schools (see Table 5). Early childhood

education experts were contacted for their expertise in the field; the childcare centre cook was contacted for their direct experience providing food to children; the ECE from the before and after school care program had school lunch room experience in kindergarten classrooms; the OISE student-teacher offered insights based on first-hand experiences working with 3-to-5-year olds in both childcare settings and kindergarten classrooms; the TDSB teachers outlined their observations of tens and, in some cases, hundreds of kindergarten aged children in both the half day and full day kindergarten programs; and the one parent had had children at the school that was the key motivating case for the study and, at the time of her interview, had her children at one of the study schools. Recruitment of key actors occurred through social networks. Interviews were semi-structured to allow interviewees to speak to their knowledge base and always began with a description of the nature of the study.

Table 6: Key informant interviews.

Name ^{37,38}	Relevant Role(s)
Kerry McCuaig	Early childhood policy fellow at the Atkinson Centre for Child Development, Ontario Institute for Studies in Education (OISE), University of Toronto
Fidelia Torres	Instructor at the School of Early Childhood Education, George Brown College; Child Care Services Manager for the TDSB supporting the transition into the FDK program and the implementation of the FDK before and after school care program
Beverley Crossdale	Early Childhood Consultant with Community Living Toronto
R	In-house cook at the Raspberry Daycare
E	ECE at the Raspberry Daycare and Before and After School Program
CB	Lunchroom Supervisor at the Red Mulberry School

³⁷ Only the names of key informants whose views are in the public domain have been included. All other key informants' names have been withheld to protect the anonymity of the children they work with.

³⁸ For key informant interview dates see Appendix C.

MS	OISE student-teacher at the Blueberry School; former ECE with kindergarten aged children prior to FDK
EC	TDSB kindergarten teacher; former ECE
DK	TDSB kindergarten teacher; parent of child at Red Mulberry School
MR	TDSB kindergarten teacher at the Red Mulberry School
IC	TDSB kindergarten teacher at the Huckleberry School
MD	TDSB kindergarten teacher
MRB	TDSB kindergarten teacher at the Raspberry School
GT	Health and Physical Education teacher at the Raspberry School
JB	TDSB special needs teacher; parent of allergenic child at the Red Mulberry School
AS	Parent of children at the Red Mulberry School, moved to Raspberry School
NN	Lunchroom supervisor at Red Raspberry School
JJ	Special Needs Assistant at TDSB school in study area

Analysis

Analysis of data collected by this study draws primarily on two seminal sourcebooks for qualitative data analysis, both of which aim to facilitate research conducted *with* people, rather than *on* people—Reason and Rowan’s (1981) paradigm shaping sourcebook on human inquiry and Miles, Huberman and Saldaña’s (2013) qualitative data analysis sourcebook (first published in 1994). In the former, Reason and Rowan (1981) stress the importance of sifting through findings “over and over again” (248) and Marshall (1981) explains that throughout the iterative process of research and analysis “categories build up” and “chunks of meaning” emerge (397). In the latter Miles, Huberman and Saldaña (2013) also stress “maintaining openness” (13), while describing six classic analytic moves as follows:

- Assigning codes or themes to a set of field notes, interview transcripts or documents

- Sorting and sifting through these coded materials to identify similar phrases, relationships between variables, patterns, themes, categories, distinct differences between subgroups and common sequences
- Isolating these patterns and processes, and commonalities and differences, and taking them out to the field in the next wave of data collection
- Noting reflections or other remarks in jottings, journals, and analytic memos
- Gradually elaborating a small set of assertions, propositions, and generalizations that cover the consistencies discerned in the database
- Comparing those generalizations with a formalized body of knowledge in the form of constructs or theories. (1)

Taken together, the process applied in the analysis of study data was immersive, cycling through repeated iterations, and followed the classic qualitative analytic moves.

This study produced a significant amount of data—field notes from 10 days of full day observations in the childcare setting, field notes from 17 days of full day observations in the school setting, 131 interviews of varying lengths with child participants across the 3 phases, parent surveys and 18 key informant interviews, typically lasting 1-1.5 hours, and the analysis followed the lengthy approach outlined above. In the summer and fall of 2015³⁹ following completion of fieldwork with child participants, the initial cycle of data immersion and manual transcription of field notes, resulting in the development of coding categories, was conducted (see Appendix D). Throughout the winter, spring and summer of 2016, a second cycle of immersion was conducted as interviews were transcribed. As part of this process, themes,

³⁹ During this time, a change in circumstances resulted in a temporary loss of childcare, which had the effect of reduced progress in the study.

patterns and possible structures for findings were explored, including case study, issue base, gender, and core and outlier findings. Once transcription of both field notes and participant interviews was complete, NVIVO qualitative data analysis was used to code the data for a third immersive round in the fall of 2016 (see Appendix D for NVIVO Nodes).

In the winter of 2017, revision of each of the three immersive rounds led to developing a findings structure organized around the domains of the wellbeing model, with emphasis given to the clearest findings. Over the course of the spring and summer of 2017, three manuscripts for publication, representing the three findings chapters of this dissertation, were developed, submitted and sent for peer review. This included: a manuscript on material security, evaluating the setting, for the international journal *Social Indicators Research*; a manuscript on relationship, identifying the importance of ECEs in the kindergarten eating environment, now published in the *Canadian Journal of Childhood Studies* (JCS) (Bas, 2017); and a manuscript on engagement, centred on findings regarding choice, in review for the journal *Canadian Food Studies* (CFS). The first manuscript passed through the Springer Journals pre-selection process and was recommended for one of five other Springer Journals through their Transfer Desk, the second immediately entered review, and the third was accepted for review but did not immediately enter review. Through the process of writing remaining portions of the dissertation and assembling the three manuscripts as the findings section, three issues emerged: repetition of some findings across two or more manuscripts, absence of some findings within any of the manuscripts, and weak connections in the engagement domain. As a result, processes with the Springer Journals Transfer Desk and CFS were paused while the manuscripts were reviewed by my committee as part of my dissertation, then reformulated more coherently within the overall dissertation structure. Ultimately, with relatively minor adjustments to the two unpublished manuscripts, the

articles were structured as follows: one on Sites, Settings and Self-Reported Wellbeing (formerly material security) for the international journal *Child Indicators Research* (the journal the Springer Journal Transfer Desk algorithm identified as most suitable for publication), one on Perceptions of the Kindergarten Eating Environment (formerly engagement) for *Canadian Food Studies*, and finally the already published one on the Central Role of the ECE (formerly relationship) in the *Journal of Childhood Studies*. The manuscript for *Child Indicators Research* will be resubmitted through the Transfer Desk (July 2018) and the manuscript for *Canadian Food Studies* is expected to appear in the fall 2018 issue.

Summary of The Research Context

Part 1 has offered the context for the study including a literature review, framework and methodology. The literature review outlined the relevant policy landscape, in both early childhood education and school food, school food assessment and child wellbeing. The framework established the critical underpinnings of a wellbeing model designed to assess meaningful outcomes. And the methods section highlighted the importance of participatory work with young children and described the research design and analysis. Through the exploration of this material it emerges that there are parallels between advocacy for childcare and school food programs, there is a lack of research exploring the environments where children eat while at school and that, in studying the impacts of each of these issues, child participation is paramount.

Available literature suggests that both the erosion of access to childcare in Ontario in the early 1950s (Prentice, 1989) and the failure to implement either a provincial (Carbone, 2016) or national (Rutledge, 2009, 2016) universal school lunch program in the post-WWII era was tied to a moralized view of both mothering and nutrition which led to policies that scholars (Finkel, 2006; Rutledge, 2009) argue were designed to force women back into the home. Childcare at that time, like childcare subsidies today, was only available to those who could demonstrate their need through means testing designed to target government support. Similarly, while nutrition programs are currently offered to all students in schools where they are available (in response to research which has demonstrated the deleterious effects of targeted approaches), provincial funds continue to target so-called designated areas for student nutrition programs (de Wit, 2012; Munter & Murumets, 2013; Muthuswamy, 2012). Both historically and in the present, the

responsibility of caring for and nourishing children falls disproportionately on women and, consequently, while not a central theme in this study, it is impossible to ignore the gendered implications of these issues. The fact that Canada consistently scores low on both international assessments of early learning and care (Pascal, 2009) and on child nutrition statistics (Brazier, 2017) suggests that this represents an institutional failing that is having a negative impact on Canadian children. Indeed, research reports have described the provision of both childcare services and school nutrition policies in Canada as an uneven patchwork with significant gaps (Leo, 2007; Pascal, 2009; Prentice, 2006).

That said, the current regulatory framework in the childcare setting offers clear, age-specific parameters with respect to eating environments in childcare settings. The plan of action on which Ontario's full day kindergarten program is based, *Our Best Future* (Pascal, 2009) promoted the provisioning of healthy meals and snacks in the full day kindergarten program, outlined the importance of continuity of care and recommended that kindergarten children be supervised at lunchtime by two familiar ECE-trained educators. The draft program (Ontario Ministry of Education, 2010b), however, made no mention of the lunchtime and the two mentions in the FDK program (Ontario Ministry of Education, 2016b) indicate challenges with respect to the arrangement of classroom furniture for eating and lunchtime staffing. Indeed, while there is clear regulation for eating environments in the DNA and the CCEYA there are no regulations whatsoever for the kindergarten eating environment.

Indeed, given the lack of research and evaluation of school eating environments, the lack of policy is not surprising. Despite the existence of integrated program evaluation models, school food environment literature remains focused on the school food retail environment. And, despite

a robust literature on positive mealtime environments in early childhood education and care, these findings are not applied in the kindergarten eating environment. There is a need for research to understand the social and physical environments where children eat at school in Canada beyond retail environment assessments.

Additionally, research, advocacy work and evaluation frameworks for both FDK and school food predominantly focus on outcomes and on who the children will become. Evaluation to assess outcomes is important. At the same time, evaluation considering children's current experiences, who they are and how they feel in their day-to-day lives, is comparatively sparse. Crivello et. al. (2009) outline that children are often the most affected by adverse circumstances and Prillettensky explains that children's limited social power means that they lack political voice. Yet, as Ben-Arieh (Ben-Arieh, 2005) argues, if we accept children as equal beings, then we have to give them voice. To do this we must value their present lived experiences (Fattore et al., 2007). Prior to this study, there had been no available literature on the kindergarten eating environment that works directly with the children and there is no literature whatsoever on the kindergarten eating environment in Ontario's new FDK program. This study examines the impacts of the kindergarten eating environment on child wellbeing and seeks to contribute to the ongoing conversation regarding school food.

Part 2 offers the findings from the research including demographics, contextual findings, and the findings sections from the three manuscripts for publication. The demographics section compares the demographic makeup of study participants with publicly available TDSB demographic data and the contextual findings section highlights observations regarding issues that impacted participant wellbeing. Because this is a modified three paper format dissertation,

the remainder of Part 2 offers only the findings sections of the three manuscripts for publication (see full versions of the manuscripts in Appendix E). The first, Sites, Settings and Self-Reported Wellbeing, establishes the basic structure of each of the study sites, including lunch and snack arrangements at all three childcare centres and in all eight classrooms at the three schools, and shares participants' lunch time self-reported wellbeing. The second, Perceptions of the Kindergarten Eating Environment, reflects responses to open ended questions regarding the kindergarten eating environment from parents, staff and child participants. The third, the Central Role of the ECE, identifies the importance of trained early childhood educators in both the kindergarten classroom and, where present, the kindergarten lunchroom. Finally, Part 3 includes the discussion from each of the three manuscripts, and the overall conclusion, recommendations, limitations and directions for future research.

PART 2: Findings

Findings

Findings from this study have been developed into three manuscripts for publication, one of which has passed pre-selection process, another is in review and a third was published last year (Bas, 2017). In order to render the dissertation more readable and to minimize repetition (in particular to avoid repeating the study rationale, framework and methodology) Part 2 of the dissertation presents only the findings sections of each manuscript. Part 2 offers the research findings, first presenting participant demographics and contextual findings, followed by the findings sections of the three manuscripts. The first manuscript, Sites, Settings & Self-Reported Wellbeing, describes each of the sites across each of the three phases, outlines the seating arrangements, staffing and food provisioning in phases one and two, and shares participants' self-reported lunchtime wellbeing across all three phases (see full-day self-reported wellbeing tables in Appendix F). The second manuscript, Perceptions of the Kindergarten Eating Environment, reports parent and staff perceptions and child participants' experiences of the kindergarten eating environment (see summary notes on each participant in Appendix G and summary notes on each site in Appendix H). And the third manuscript, the Central Role of Early Childhood Educators, explores the role of the ECE in kindergarten classrooms and lunch rooms.

Demographics

Initial site selection (outlined in methods) was designed in an effort to generate as representative a sample as possible. Participants' demographic information was collected as part of the parent survey (see Appendix C) in phase one, designed to capture information using the same terms as the TDSB's second Student & Parent Census (Yau, Rosolen, & Archer, 2013) so that the sample could be measured against this publicly available information. The parents of 13 of the participants completed the parent survey and the data collected is as follows. The comparison with TDSB demographics is part of contextualizing the study but is not meant to suggest that the results are universally applicable.

Gender

The gender of participants was confirmed with parents when registering for the study. Over the course of the study there were 21 participants, 11 male participants and 10 female participants, or 52.4% male and 47.6% female. Of the 17 full-study participants, 8 were male and 9 were female, or 47% male and 53% female.

The TDSB reported that 49% of JK to grade 6 students were female and 51% were male in the 2011-2012 census (Yau et al., 2013). Accounting for all 21 participants, 47.6% were female and 52.4% were male such that, over the course of the study, males were slightly overrepresented relative to the general population. However, accounting for the 17 participants who participated throughout the entire study, 53% were female and 47% were male, such that females were slightly overrepresented, relative to the general population. Overall, the gender distribution of participants was close to representative.

Ethno-Racial Background

Like the TDSB Student & Parent Census, the parent survey enquired into both the racial identity of the contact parent or guardian and the child participant. Including the parents or guardians of 13 of the full-study participants who completed the survey and the parents of 2 other full-study participants who communicated directly with the researcher regarding their ethno-racial background, there are data for 15 of the 17 full-study participants, or 82.4% of the families in the study.

- The two largest groups included 6 respondents.
- 6 child participants were described by their parents or guardians as either “biracial,” “mixed race” or “triracial.” These included: a child described as “mixed race” by their “Indian/White/Jewish” parent, a child described as “biracial: Black & White” by their “White” parent, a child described as “triracial: White, Black, Latin American” by their “White” parent, a child described as “biracial—Caucasian/Asian” by their “East Asian” parent, a child described as “White and Latin American” by their “White” parent, and a child described as “Biracial Latino” by their “Biracial Latino” parent.
- One parent or guardian who identified as “half Japanese” identified their child as “White probably” leaving the question of whether to identify this child as “White” or “mixed race” subject to interpretation.
- 6 parents or guardians identified as “White”, though only 4 identified their participating child as “White”—one did not reply to the question for their child and another noted that their child “does not identify with a demographic profile”.
- Two families, who reported directly to the researcher, reported that they are “Latin American” and “Asian” respectively.

- Excluding the three respondents with uncertain ethno-racial responses, the ethno-racial profile of participants: 6 “mixed race” participants or 46.2%, 4 “White” participants or 30.8%, 1 “Latin American” participant or 7.7% and one “Asian” participant or 7.7%.

The TDSB reported the following proportions of self-identified ethno-racial groups among respondents: 29% White, 24% South Asian, 15% East Asian, 12% Black, 9% Mixed, 5% Middle Eastern, 4% Southeast Asian, 2% Latin American and 0.3% Aboriginal (Yau et al., 2013). Including only participants with clear responses to the ethno-racial background question, study participants were 42.6% Mixed, 30% White, 7.7% Asian and 7.7% Latin American. Thus, mixed-race participants were overrepresented in this study relative to the TDSB Census, the number of white participants was representative, Asian participants were underrepresented and Latin American participants were overrepresented.

Home Language

All 13 respondents reported speaking English at home. Two of these respondents additionally noted speaking Spanish in the home and a third respondent noted that the participant’s grandparents speak Portuguese in the home. Additionally, the family who reported being “Latin American” to the researcher also reported speaking Spanish in the home. No other languages were reported as being spoken in the homes of participants.

The TDSB reported that English was the sole home language for 44% of respondents, 22% spoke English and another language and 34% only spoke another language. Among study respondents, 76.9% reported speaking only English at home and 23.1% reported speaking English and another language (Yau et al., 2013). As outlined in the Methods section, efforts were

made to recruit families in which the parents or guardians did not speak English (including translating study information and communicating with the assistance of preferred staff members), but these efforts were not successful. Additionally, the families who verbally identified as “Asian” and “Latin American” but did not complete the survey were observed speaking with their participating child in languages other than English.

Place of Birth

All 13 respondents noted that their participating child was born in Canada. Six parents reported that they themselves were born in Canada, two reported that they were born abroad and five did not respond to the parent place of birth question.

The TDSB reported that 80% of JK to Grade 6 students were born in Canada and 20% were born outside of Canada (Yau et al., 2013). 100% of study participants were born in Canada. Children born outside of Canada are not represented in this study.

Parent Presence at Home

The child participants of 9 of the respondents live with both parents, 3 live with their mother and 1 lives with both parents and two grandparents.

The TDSB reported that 80% of students reside with both parents, 16% reside with their mother only, 2% reside with their father only and 3% reside with others (Yau et al., 2013). In this study, 76.9% of participants reside with both parents and 23.1% reside with their mother only. Thus single-mother families are slightly overrepresented among participants and two-parent families are slightly underrepresented.

Approximately 19% of households have three or more adults in the home (Yau et al., 2013). In this study, only 7.7% of respondents noted the presence of three or more adults in the home.

Family Size

8 participants live in a two-child family with a sibling, 1 lives in a three-child family with two siblings and 4 are only-children.

According to the TDSB's second Student & Parent Census, 32% of TDSB families have 3 or more children, 49% have 2 children and 19% have one child (Yau et al., 2013). In this study, 7.7% of respondents indicated a family size of three or more, 61.5% had 2 children and 30.1% were families with only one child. Thus, in this study, larger families are underrepresented and both 2-child and 1-child families are overrepresented.

Parent Education

The families of 13 participants completed the survey. One participant is the child of a same-sex couple with two mothers, so there is data for 14 mothers. Three participants live in single-parent households with their mothers, one of these mothers included the father's education level in the survey, so there is data for 11 fathers.

Among the mothers of the participants, 1 had completed secondary school, 3 had completed college, 4 had completed university, and 6 had post graduate degrees.

Among the fathers of the participants, 2 had attended elementary school or had received no formal education, 3 had completed secondary school, 2 had completed college, 1 had completed university, 1 was pursuing post graduate studies at the time of the study, and 2 had post graduate degrees.

Among the families who provided information for two parents, 4 had the same level of education (including the same-sex couple), women had more education in 7 cases (including one of the single-parent families), and the man had more education in 1 case.

At the time of the second Student & Parent Census the TDSB reported that, among parents of JK to grade 6 children, 56% had university education, 23% had college education, 18% had secondary school education and 3% had elementary school education or none (Yau et al., 2013). The parent survey for this study collected data for 25 parents. Among these parents, 56% were university educated, 20% had college education, 16% had secondary school education and 8% had elementary school education. Parental education levels were representative, with university educated parents exactly matching TDSB census findings, college and secondary school educated parents being slightly underrepresented and parents with elementary school or no formal education being overrepresented.

In this study, 33.3% of two-parent families had the same level of education, in 58.3% of cases the mother had more education than the father and in 8.3% of cases the father had more education than the mother.

Socio-Economic Status

11 respondents answered the annual household income question. Two families earn less than \$30,000 per year, no families selected \$30,000 to \$49,999, two families reported earning \$50,000 to \$74,999 per year, two families reported earning \$75,000 to \$99,999 and six families reported earning \$100,000 and up.

The Student & Parent Census reports that 28% of TDSB families earn less than \$30,000 per year, 21% earn \$30,000 to \$49,999, 15% earn \$50,000 to \$74,999, 10% earn \$75,000 to \$99,999 and 26% earn \$100,000 and up (Yau et al., 2013). In this study, 18.1% of respondents indicated earning less than \$30,000 per year, 9% of respondents reported earning \$50,000 to \$74,999 per year, 18.1% indicated earning \$75,000 to \$99,999 per year and 66% reported earning \$100,000 and up. Thus, families in the highest income bracket are vastly overrepresented in this study and families of all other income brackets are underrepresented.

It may be worth noting that, among the 13 respondents to the survey the two families who did not respond to this question were a single-parent family and a family in which both parents had secondary school education. It is possible that the availability of this data could have balanced the results somewhat. This, combined with the 8 families that did not respond to the survey, means that for this question there is data for only 11 of 21 participating families.

Additionally, it should be noted (as outlined in the methods section) that sites were selected so that the average parental income was not more than \$5000 over the poverty line. Though there was one exception, where average parental income was higher, this site did not represent a concentration of higher income among the families of participants. Despite this, there is an overrepresentation of high income families among survey respondents. This may be due to lower

survey response rates among lower income families, though surveys were not completed by the families of 4 of the full study participants and by the families of all 4 partial study participants and there is nothing to indicate that any of these families are lower income.

Finally, the dispersion of family income may speak to childcare issues. The high cost of childcare in Ontario means that full time child care is primarily accessible either to families with sufficient income to warrant the cost of childcare or to those families who qualify for subsidy offered, in Toronto, through Toronto Children's Services. In other words, childcare at childcare centres may be most available to those at either end of the socio-economic spectrum. While the sample size in this study is small, there is a notable gap of families in the middle-income ranges.

Parent Occupation

Families of 8 of the participants responded to this question. Among these in 3 families both parents jobs fit the same classification—'professional and senior management' in 2 cases and 'film and television' in the other case; in 2 families both parents jobs fit similar classifications—in both cases the mother was in 'professional and senior management' and the father was in 'professional and middle management'; in 2 families the mother was in 'professional and senior management' and the father was in something else—'clerical and trades' in one case and 'artist' in another; in 1 family the mother noted 'Mary Kay Business' and the father is in 'construction'. One family noted "these categories don't fit our careers," but offered no further information. None of the single-parent or low-income families responded to this question.

The TDSB's parent census only reported on the occupation responses of students in grades 7-12. Among parents of these students, 24% had parents working in professional or senior management, 26% had parents working in semi-professional and middle management with "the remaining half" having "parents who work in skilled, semi-skilled, and unskilled clerical and trades occupation, and those with parents who are non-remunerative, including homemakers, unemployed or retired." (Yau et al., 2013) Eight two-parent families responded to this question in the survey. Among the respondents, 50% were working in professional or senior management, 12.5% were working in semi-professional and middle-management, 12.5% were in film and television, and the remaining 25% were evenly distributed between clerical and trades, construction, art, and self-employed.

Demographic analysis reveals that the makeup of study participants was anomalous in that it overrepresented:

- Mixed race children
- Children from English speaking households
- Canadian-born children
- Single mother families
- Children with fewer siblings
- Families in which the mother has more education than the father
- Families in the highest income bracket.

Observations suggest that some of these findings may be a result of gaps in the data. For example, two families observed speaking to their participating children in other languages did not complete the survey. Additionally, among families that did complete the survey, parents who

indicated lower levels of education did not complete the socio-economic status portion of the survey. Nonetheless, given that the sites selected for the study were not, according to the Fraser Institute data, schools with high average parental income, the demographic makeup of the study participants may speak more to two issues—parents who consent to study participation and parents who access full-time childcare. With respect to the first issue, at one site, all parents for whom English was not their first language declined to participate. While efforts were made (materials were translated to their preferred language of communication and familiar staff introduced them to the study), none of these families joined the study. With respect to the second issue, overrepresentation of female-headed households and households in which the mother has a high level of education speaks to the importance of childcare to support women’s ability to work (Sinha, 2014).

Contextual Observations

The main findings are presented below, but over the course of the study a significant amount of data was collected on each participant, providing the context for addressing the central research questions and for understanding the participants themselves. While not the central focus of the study, these observations added depth to the understanding of participants’ wellbeing in the kindergarten setting. These contextual findings include findings relating to gross motor activities, rest, technology in the kindergarten classroom and gendered observations. (Summaries of each participant are available in Appendix G.)

Gross Motor

Many children explicitly express joy when looking forward to, doing or recollecting gross motor activities. In fact, in addition to observations indicating children’s positive experiences during gross motor activities, six participants independently describe high levels of

wellbeing associated with outdoor gross motor play during their P3 interviews (MB, RB, JB, JaH, AH and NH). While none of the participants at the Raspberry site discussed their joy in outdoor play, P3 at this site was conducted during a particularly cold January and one participant (ZR) independently expressed that she was sad because she could not go outside due to the cold weather. (On ZR's observation day, an extreme cold weather alert meant that there was indoor recess that day.) Additionally, 4 male participants appeared notably happiest during, or immediately following, vigorous or outdoor play (EB, JaH, NH and JoH).

Rest in the Kindergarten Classroom

Some participants appeared to still require a nap by the end of their junior kindergarten year (BB, OB and AR all found a space to lay down in the classroom and KR and AH were both visibly exhausted). While not all participants required a nap or a rest, in each of the 8 study classrooms there were multiple children who were visibly tired, resting and/or sleeping through class during the after-lunch period. Key informants included kindergarten teachers in the TDSB who all expressed that, in every kindergarten class, there are children who require a rest or a nap after lunch. Some key informants estimate that approximately 10-20 per cent of kindergarten children require a rest time after lunch and, also, many suggest that the afternoon is difficult for children, either because they need a rest or because the day is too long. This is consistent with classroom observations. Additionally, the classroom ECE in AR's class spoke about AR's exhaustion level and explained that she had had frequent "meltdowns" due to exhaustion. The issue of rest and apparent need for nap is an issue which impacts the wellbeing and staff identified 'behaviours' of a portion of junior kindergarten children in FDK connected to this issue.

Technology

Both of the kindergarten classrooms at the Blueberry School were equipped with computers, iPads and a Promethean Board—an interactive whiteboard with internet access. In both of the classes, the iPads and computers were available during centre time and the Promethean Board was used for interactive lessons. In one of the classes, the West classroom, the Promethean Board was occasionally used for a short, high intensity physical activity when the teacher described feeling that the class was getting ‘rowdy’. On these occasions, all of the students would participate in a 1 to 3-minute physical activity led by a program on the Promethean Board. In the other classroom, the East classroom, the Promethean Board was available during centre time with access to children’s videos and songs. In the East classroom at the Blueberry School three of the four P3 participants (MB, JB and LB) were unable to focus on any other activity when the Promethean Board was on (in particular MB and LB), one (JB) was never observed to engage in any activity that did not involve technology on any of the observation days in that classroom, and another (MB) was unable to eat snack when hungry, carry on a conversation, focus on a teacher-assigned drawing or remember to go to the washroom. On observation days, other classmates appeared to be absorbed in the videos at similar rates as participants, regardless of what centre they had chosen. Additionally, in this classroom, centres that were popular in other classes in the study, such as a science table, a water table, and a painting centre, remained unattended.

Gendered Observations

Three sets of gendered observations stood out—gendered differences in speaking in a group setting, gendered reports of feelings and boys who showed signs of distress in a formal classroom setting. In P3 it was observed among both participants and their peers that female students spoke less than their male peers in group settings, such as carpet time. Most female participants (with the exception of ZR and MH) rarely, if ever, raised their hands to speak. In

some cases, for example OB and LR, girls were not called on, even when they raised their hands to speak repeatedly over the course of an entire school day. Similarly, ZR raised her hand frequently, but was only called on to speak once throughout the school day. By contrast, both LB and EB, 2 boys at the Blueberry School, were consistently called on to speak when they raised their hands and MB, another boy at the Blueberry School, was repeatedly called on to speak even when he had not raised his hand. On the other hand, GH, a boy at the Huckleberry School, also often raised his hand and was not called on to speak. These observations were consistent with patterns of classroom dynamics observed throughout the study in the classroom setting and point to a need for further study regarding gendered patterns of opportunities to speak in a large group setting in the kindergarten setting. These patterns have been studied in adult settings, but these observations suggest that these issues begin in the initial stages of classroom education.

Gendered reports of feelings fall into two main categories—male participants' citing violence as the one cause of negative feelings and female participants' reluctance to report negative feelings. Generally, male participants easily expressed a wide array of feelings, indicating from both the positive and negative sides of the WB chart. Interestingly, three boys, MB, RB and JaH, independently offered that they only feel sad when they are hurt, kicked or punched, though this was not consistent with their reporting. Female participants, on the other hand, demonstrated reluctance to express negative feelings. Six female participants, JB, BB, OB, AR, ZR and AH, did not report any negative feelings across the three phases of the study, even when appearing visibly unhappy or on the brink of tears. Another female participant, MH, stated in an interview that she never feels any way but happy, though she did report negative feelings on the WB charts. GH, a boy at the Huckleberry Site, was the one male participant who reported a narrow range of emotions, consistently reporting a neutral feeling.

All of the boys at the Huckleberry site appeared to be in some distress in the kindergarten setting. In phase 1 they had all received ample attention from the ECE staff. In P3, three of the boys were in a class with no ECE and each of them engaged in significant levels of aggressive and disruptive behaviour, none of which had been observed in P1. In P1 two of these boys were observed crying and requiring additional emotional support, but at no point during observation did this escalate to aggressive or violent behaviours. The one boy in another classroom (GH) did benefit from ECE attention in the classroom (in particular after a fall and in gym class), though he was observed to cry multiple times throughout the P3 observation day and the teacher reported that he cries often. This is particularly noteworthy because GH was not observed crying at all on any of the P1 observation days, either on his own observation day or on those of his peers. There were no male participants at the Raspberry School in P3. The male participants at the Blueberry School did not exhibit similar signs of distress, though MB was given a 'time out' on his observation day and EB was singled out for his enthusiasm for 'talking silly'.

Sites, Settings & Self-Reported Wellbeing

Sites

The study was conducted at three TDSB schools, each of which housed independently run childcare centres that offered both full-day childcare for younger children and before and after school care for school-aged children. This section describes the childcare, after-school care and kindergarten settings at each of the three sites as observed in each of the three phases.

Phase 1.

All three childcare centres—Blueberry, Raspberry and Huckleberry—are not-for-profit, licensed childcare centres that are eligible for the City of Toronto childcare centre subsidy and, also offer before and after school care to children once they start school.⁴⁰ This ensured a level of continuity for participants. Children in the study were both already acclimated to full days away from their parents within the school building and received care from familiar adults during part of their day as they transitioned to FDK. By regulation, the staff-to-child ratio in the preschool rooms is 1:8 with a maximum of 16 children in the room. On the 12 observation days in P1, there was only one day with as many as 15 children, while 13 or 14 kids were present on the remaining days. Furthermore, due to the presence of students doing their practicum for their early childhood education training and other support staff, there were often more than 2 trained adults in each room, sometimes as many as 4 were present, with the effect that staff-to-child ratios were consistently better than 1:8 on all childcare centre observation days.

⁴⁰ At some schools in the TDSB, childcare for pre-school aged children and before and after school care for school aged children are offered by separate organizations. In fact, in some schools as many as four separate groups operate childcare centres and before and after school care in the school building.

Phase 2.

Phase two interviews were conducted in the after-school care setting (commonly referred to as ‘aftercare’) which, at all three sites, was also the regular classroom for some of the participants. At the Blueberry⁴¹ site, the aftercare room was the regular classroom for 4 of the participants; at the Raspberry site it was the regular classroom for 2 of the participants; and at the Huckleberry site it was the regular classroom for 4 of the participants. This is significant because 10 of 17 full study participants benefitted from fewer transitions over the course of their day and research has demonstrated that transitions are challenging for young children (Hemmeter, Ostrosky, Artman, & Kinder, 2008). Additionally, those participants who were in their regular classroom during their after-school interviews were able to indicate where they sat for lunch and snack times and had a comparatively easy time recalling their daytime experiences.

Phase 3.

In phase three, the participants at the three childcare centre-school pairings were, for the first time within the study, spread out into eight classrooms. At the Blueberry School, 4 participants were in the east room that also served as the aftercare room and 3 participants were in the west classroom; at the Raspberry school, 2 participants were in the north-east classroom that also served as the aftercare room and there was 1 participant in in the north-west class and another in the south-west class; and at the Huckleberry School, 4 participants were in the northwest class with only 14 students that also served as the aftercare room and there was 1 participant in the north class and 1 participant in the east class. The classes at the Blueberry School had 24 and 27 students, respectively; the Raspberry School classes had 33, 32 and 33

⁴¹ The names of the childcare centre-school pairings have been altered to protect the anonymity of participants.

students; while at the Huckleberry School the classes had 14, 28 and 28 students (see Table 6). Seven of the classrooms were staffed by a classroom teacher and an Early Childhood Educator (ECE)⁴², while the class with 14 students was staffed by only a classroom teacher. It is worth noting that, in addition to having greater numbers of children and fewer staff per child, the physical size of the classrooms was notably smaller than the rooms used for the preschool aged children during phase one.

Table 7: Participant distribution in kindergarten classrooms.

Site	Participants	# of full study participants	Total # of students in the class
East classroom Blueberry School	JB, MB, EB, LB	4	24
West Classroom Blueberry School	BB, OB, RB	3	27
North-East Classroom Raspberry School	AR, LR	2	33
North-West Classroom Raspberry School	KR	1	32
South-West Classroom Raspberry School	ZR	1	33
North-West Classroom Huckleberry School	NH, JaH, JoH, AH	4	14
North Classroom Huckleberry School	MH	1	28
East Classroom Huckleberry School	GH	1	28

Setting: seating arrangements, staffing and food provisioning

⁴² There were points in each day when, during the break of one of the regular staff members, the classrooms were staffed by one member of the teaching team.

The setting for both lunch and snack times were directly observed during the first and the third phases, with some participants being interviewed during eating times in P3. Some participants discussed their after-school snack setting during P2, though this phase was limited to brief interviews as the aftercare setting itself was not part of this research.

Phase 1.

The purpose of phase one was to establish a baseline for how the child participants felt about their experiences of eating with their peers in an eating environment structured by the clear regulations set out in the Day Nurseries Act (see Appendix A).

At the Blueberry Childcare Centre, children ate their lunch and snacks at U-shaped tables which could seat up to 8 children with one staff member in the centre of the U to help facilitate the meal. The children were positioned according to a seating arrangement determined by the ECEs, indicated with colourful placemats the children had designed themselves. Other staff members brought the food provided by a catering service to the table, so that the attending staff member at each table could sit with the children at all times. At each table, the staff began by offering a choice of vegetables, when the children were most hungry. Then a hot meal including starch and protein was offered, followed by a drink and a choice of fruit. The staff referred to this approach as ‘sequencing’ and used it to encourage healthy eating habits while allowing the children to make their own choices. In addition, the attending staff member also ate with the children to model meal time behavior. Children had the opportunity to make choices, serve themselves and participate in mealtime socialization. This setting was a calm, quiet and sociable mealtime environment.

Similarly, the children at the Raspberry Childcare Centre sat at two tables, each of which accommodated up to 8 children. Each of the rectangular tables was attended to by one staff member, who neither sat with the children nor ate with them. The food was brought in by the onsite cook and one additional staff member and the children were observed to show warm feelings toward the cook. The attending staff member at each table served the food offering each child the chance to let them know if they wanted “everything at once” or to have the items “one at a time.” The staff instructed the children where to sit and the room was quiet, though there was minimal socialization.

At the Huckleberry Childcare Centre, the children sat among three tables. There was no seating arrangement, though the staff did separate particular children who were deemed to be “causing trouble” when necessary. On two of the observation days staff served lunch, while on the other two the children served themselves. On both of the days that the staff served lunch, the sequencing technique was used and on one of those days staff were observed telling children that they would not be served the hot lunch until they had eaten their vegetables. Because there was no additional staff to aid in food provisioning, much of the staff’s time was consumed with serving and tidying up food, leaving little time to offer guidance for mealtime socialization. This lunch setting was less calm than the other two settings. It is worth noting, that this childcare centre began their lunch time half an hour later than the other two childcare centres in the study and each observation day, even before lunch had begun, both participants and other children were visibly tired before the meal started. All three childcare centres used the same seating model for both lunch and snack.

Phase 2.

The purpose of phase two was to speak with the children about their experiences of transitioning to FDK in a familiar setting and not to assess the after-school care environment.

Phase 3.

While the participants all ate both lunch and snack in their classrooms in phase three, there were a variety of arrangements because, by this point, the participants were spread across eight classrooms. Additionally, in every classroom the lunch time strategy differed from the snack time strategy and, in some classrooms, multiple snack time strategies were employed.

Lunch.

Though hot lunch programs were available at two of the study sites, all participants in the study brought their own lunch from home. At the Blueberry School, the hot lunch program was available to the grade one to eight students in the lunchroom, but not the kindergarten students, who ate lunch in their classroom. At the Huckleberry School a program was offered two days a week, and registered children were served a hot lunch at the classroom door. Only five of the 69 kindergarten children subscribed. In both cases the cost of the hot lunch was five dollars per meal. The Raspberry School did not offer a hot lunch program to any of the students.

As noted above, participants at the Blueberry School were divided among two classrooms. In the east classroom, the lunchroom supervisor had a seating arrangement for the children and outlined the lunchroom rules for the children every observation day. The supervisor, who was untrained, also let the students know how much time was left every five minutes. On the four observation days, the lunch period began calmly and became increasingly rowdy as time progressed. One day the room was relatively calm for nearly the entire 20-minute lunch period,

another it was chaotic within five minutes, and the other two were calm for the first 10 to 12 minutes. Using the classroom tables, the lunchroom supervisor had children in groups of three to five per table.

The west classroom at the Blueberry School was also supervised by an untrained adult, and the supervisor had limited English skills to communicate with students. The classroom ECE and other staff members donated their lunch break to assist. The children were seated at five tables, each with two to seven children. On all three observation days, there were three to five staff members present during the lunch time, so most tables had an attending staff member and the lunch time was calm. The assisting staff were observed organizing where the children sat. It is not clear whether this staffing arrangement extended beyond observation days. Both classrooms at the Blueberry School also had students from older grades present during eating times. This was described as an additional support, though on observation days, the older students were only observed to offer support when either the school principal or classroom teacher was present.

At the Raspberry School, four participants were spread among three classrooms, so there were comparatively limited opportunities to observe each classroom. In the north-east classroom, the lunchroom supervisor was a trained ECE who also worked with some of the children in the before and after school program. The supervisor had established a seating arrangement during the fall, pairing students who had less difficulty during the lunch time with those who had more difficulty and separating what they referred to as “the chatters”. Well aware of which children at each table required the most assistance, the lunch time supervisor easily circulated among the tables of four to five children offering guidance to those who needed it and ushering the few

children who finished quickly to quiet reading on the carpet. Though this was one of the largest classes in the study, with 33 students, it was also one of the three most effective school lunch rooms in that children were able to eat their lunches in a safe and calm environment. It was the most effective lunchroom with only one staff member, even on an observation day when there was no outdoor play due to inclement weather.

Though the other two classrooms at the Raspberry School employed a similar seating arrangement—four to five children per table, established in the fall—the results were not the same. They were both staffed by untrained adults and were observed to become loud and chaotic within the first five minutes of the lunch time. In the north-west classroom, the lunch supervisor expressed concern the moment we were introduced about not having training. Though there were spills that could not be cleaned and the room was loud and somewhat chaotic, there were no incidents in this room on the observation day. In the south-west classroom, also using a similar seating strategy, a toileting accident rendered the washroom inaccessible to students and two separate physical altercations between the children overwhelmed the lone staff person. In this classroom, a very good-natured participant dragged children trying to eat around on their chairs. Other students were also moving other furniture in the room. During the course of the 20-minute lunch period, multiple non-participants sustained minor injuries, more than 50 per cent of students ate less than half their lunch. The room had been reorganized and food was all over the floor.

At the Huckleberry School lunch time, the one class with multiple participants showed considerable variability during the observation days. On the first, the lunch was supervised by a person who had completed the classroom portion of their ECE training but had not yet completed

their practicum. Eleven of the 14 students were present that day and were seated at tables of four, three and two. The supervisor explained that it had taken approximately a month and a half to establish the lunch room rules and seating arrangement. At the beginning of the year, “lunch was crazy. I can’t explain it, it was just crazy.” On the second observation day, two of the students described by teachers as “behavioural” were absent and, the teacher explained repeatedly, the day was abnormally calm. During lunch time, the supply lunch supervisor was late, so the classroom teacher supervised the majority of the lunch time, which was calm, like the rest of that day. The final two observation days were unlike any of the other observation days in the study. By this point, the initial lunchroom supervisor had been replaced by an untrained adult and the two “behavioural” students, who were both participants in the study, were present. On the third observation day, the participant (one of the students the staff identified as behavioural) attacked three female students in five separate incidents and threatened two male students. This participant did not eat during the lunch time and, additionally, interfered with the ability of over half of the class to eat. On the fourth observation day, the participant ate quickly and, in the few remaining minutes, hit three female students and one male student, one of them multiple times. Later the participant began crying and the lunch time supervisor was not able to console him. It is worth noting that immediately after lunch, once the teacher had returned, this participant was calmer and was able to verbalize annoyance, rather than use violence. Though the seating arrangement remained in place, the character of the room changed dramatically.

The other two classes at the Huckleberry School were both supervised by ECEs who were also staff members at the onsite before- and after - school care program. In the east room, the classroom ECE stays for the lunch time and, in the north room, both the classroom ECE and teacher donate their time to offer additional support during the lunch time. The ECE in the north

room explained that they do this because “at the start of the year [lunch] was too chaotic.” While neither room employs a formal seating arrangement, both rooms offer a calm and effective lunch setting for the children.

Snack.

Both the Blueberry and Raspberry Schools offer a snack program and request a voluntary parental donation. Students are not excluded based on inability to pay, though parental consent is required. At both schools, all students present were observed participating in the school snack program. There was no snack program at the Huckleberry School. The structure for snack time in each of the eight classrooms was as follows (Table 8).

Table 8: Snack structure.

School	Classroom	When	Set up	Food
Blueberry	East	Days 1,3,5	Structured	AM: school provided PM: from home
		Days 2,4	Centre	AM: school provided PM: from home
Blueberry	West	AM PM	Structured Centre	AM & PM: school provided snack Note: some students also ate from their lunch bag during afternoon snack centre
Raspberry	North-East	AM & PM	Structured	AM: school provided PM: from home
		AM PM	Structured Centre	AM: school provided PM: from home
Raspberry	North-West	AM & PM	Centre	School provided
	South-West	AM & PM	Structured	AM: from home PM: school provided
Huckleberry	North	AM & PM	Centre	From home*
Huckleberry	East	AM & PM	Structured	From home*
Huckleberry	North-West**	AM & PM	Centre	From home*

*no snack program available; **classroom with 14 students

In the east classroom at the Blueberry School, two different strategies for snack time were employed. The school has a five-day rotation—in the east classroom, on days 1, 3 and 5 snack was offered as a station during ‘centre time’, a feature of the play-based learning time in the province of Ontario’s FDK program. On days 2 and 4 the class had a structured snack time when the children all sat and ate snack at the same time, with the staff team providing the children the food. While the ‘station’ approach is meant to promote self-regulation, one of the key goals of the FDK program, none of the participants was observed to be capable of using the snack station.⁴³ In this classroom, the structured snack time offered a chance for children to receive guidance in hand washing and table manners during a shared eating experience with their peers.

The teacher in the west classroom at the Blueberry School consistently offered a structured snack time in the morning and snack as a station in the afternoon. For morning snack, the students sat on the carpet and used hand sanitizer for efficiency, though the classroom was equipped with two sinks. Participants and other students were observed to enjoy the shared eating time with their peers. In the afternoon, students who were hungry were free to attend the snack station.

At the Raspberry School, both structured and center-time approaches were used. In the north-east classroom, the teacher employed a structured approach for both morning and afternoon on one observation day and in the morning on the second observation day. During the

⁴³ Observations suggest that the inability of students to effectively use the snack station at centre time may have been due to the use of a Promethean Board (an interactive white board with internet access), showing children’s music videos and television shows during centre time. One participant was observed going to snack table and telling the researcher that he was hungry but finding himself so enthralled by the videos that he ate nothing. This was not an uncommon occurrence in this classroom.

structured snack time, four to eight children were seated at each of four tables and had 15 minutes to eat a small snack with the supervision of both the classroom teacher and ECE. An ECE student and four grade-five students provided additional support. The students were observed to eat and receive staff guidance during these snack times. On the day that the afternoon snack was operated as a centre, students were observed making use of the snack centre. In the north-west classroom, snack was available as a center throughout the entire day. The teacher explained that this was part of the policy to promote self-regulation. By contrast, in the south-west classroom, the teacher employed a structured snack time in both the morning and the afternoon, having the children snack from their lunches in the morning and offering the school snack in the afternoon. The teacher had observed that the children were hungrier in the afternoon though this may be due to the challenges during lunch time described above.⁴⁴

Two of the three classrooms at the Huckleberry School exclusively used the centre-time approach, while the other classroom exclusively used the structured approach. In the north-west class, the centre-time approach appeared effective, though it was noted that one of the teacher-described “behavioural” students ate enough during centre time that he wasn’t hungry at lunch and was disruptive while his peers were eating. In the east class, the teacher described the center-time approach as an effective ECE driven strategy, explaining that the use of a structured snack time earlier in the year had consumed too much class time. It is worth noting, however, that the one participant in that class ate so much for morning snack, just 20 minutes before lunch, that he was unable to eat at lunch time and then complained of hunger shortly after lunch. The north classroom effectively used a structured snack time on the carpet in both the morning and afternoon.

⁴⁴ In the classes where the lunch environment was calm and students were more able to eat, the majority of children ate little or nothing in the afternoon and did not comment on hunger.

Children's Self-Reported Wellbeing

Child participants self-reported their wellbeing in multiple short interviews using a developmentally appropriate wellbeing chart, represented numerically here as follows: 'super happy'/WB5; 'happy'/WB4; 'in the middle' or neutral/WB3; 'sad'/WB2; 'super sad' or 'angry'/WB1.

Table 9: Children's self-reported experiences of eating at the Blueberry Childcare centre and School.

	Phase 1	Phase 2a	Phase 2b	Phase 3
EB	5	4	5	5
JB	5	5	4	5
LB	3*	4	n/a	5
MB	5	n/a	n/a	4 & 2
BB	5	n/a	n/a	4
OB	5	4	n/a	5
RB	n/a	4	4	2
DB	5	n/a	n/a	n/a
LiB	5	1**	3**	n/a

*before lunch; **no longer at Blueberry School, but still in the after-school care program

Table 10: Children's self-reported experiences of eating at the Raspberry Childcare centre and School.

	Phase 1	Phase 2a	Phase 2b	Phase 3
AR	5	3 & 5	n/a	3 & 5
LR	3 & 4	4	2	1
KR	4	4 & 2	2	4
ZR	5	3	5	5
SR	5	n/a	n/a	n/a

Table 11: Children's self-reported experiences of eating at the Huckleberry Childcare centre and School.

	Phase 1	Phase 2a	Phase 2b	Phase 3
NH	1*	3	2	1 & 5
AH	5	5	5	4
JaH	5	3	3	5
JoH	5	5	n/a	1
MH	n/a	n/a	2	4
GH	3	3	n/a	3

*sad throughout the day that day; **exclusively reported feeling neutral

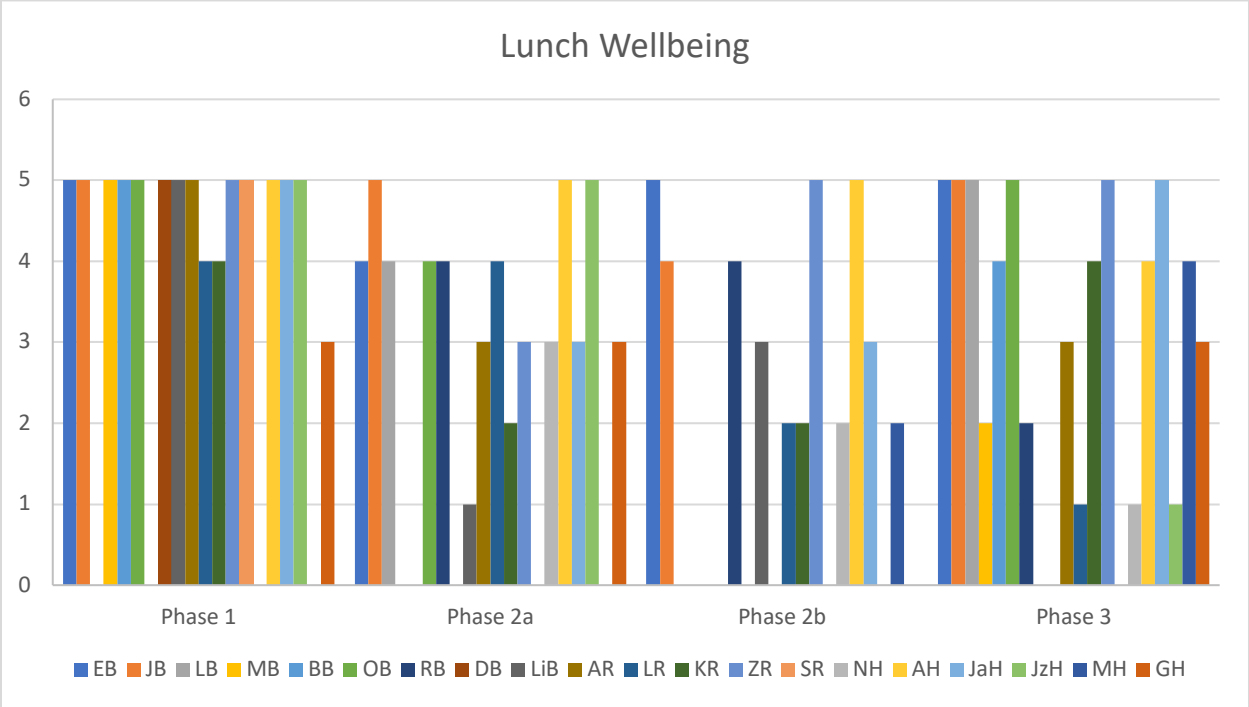


Figure 6: Children’s self-reported lunchtime wellbeing across all phases at all sites.

Phase 1.

Children’s experiences of eating at all three sites were overwhelmingly positive. In fact, with the exception of three participants—participant LB, who was interviewed before lunch when he was hungry, participant NH, who was tired and crying for mom, and participant GH, who only ever reported feeling “kinda in the middle” about any eating experience—the children all reported feeling ‘happy’ or ‘super happy’ about eating at childcare centres.

Phase 2.

Phase two involved asking the participants to recall, after school, how they had felt about lunch earlier that day. Both because memory is constructive (and not reproductive) and the participants were only three or four years old during phase two, this data may be less reliable than the *in situ* data from phases one and three. Nonetheless, it is noteworthy that the participants

begin to express sadness and anger about their eating experiences as they transition to FDK. In particular, two participants—participant LR and participant MH—describe feeling badly because they do not have enough time to eat at lunch time. Additionally, three participants—participant JB, participant KR and participant AH—describe their feelings about eating at school exclusively based on how much they like or dislike the items their parents or guardians have packed.

Phase 3.

Phase three results demonstrate a full range of feelings among participants, with greater nuance and accuracy than phase two, most likely because participants were reporting on their current feelings and because they were more developmentally advanced. That said, there was a subset of participants who consistently provided the same responses. For these participants observational and interview data provided the basis for analysis. Five female participants—JB, BB, OB, ZR, and AH—never reported any negative feelings and one male participant—GH—only ever reported feeling neutral. At the same time, the other 11 full-study participants demonstrated a clear ability to identify a range of feelings in the moment and were able to articulate how their current environment had impacted them. Looking exclusively at the *in situ* self-reported lunch time wellbeing of the 11 participants who most reliably reported their wellbeing demonstrates a clear downward trend (see Figure 8).

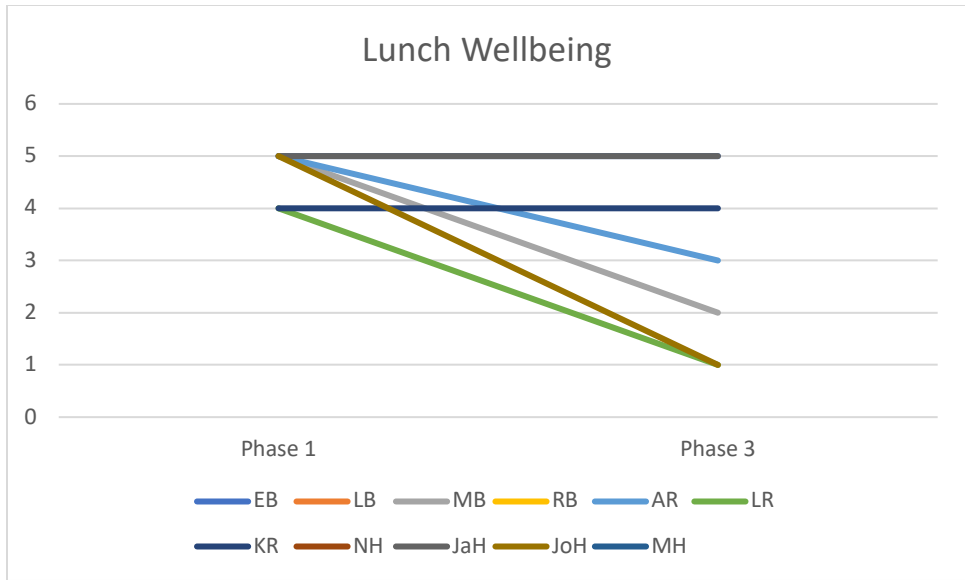


Figure 7: Lunch time wellbeing, P1 and P3.

Note: some participants followed the same trajectory or appear as a single data point.

Participants who reported being happy at lunch (including those who only ever reported positive feelings), for several reasons for their feelings. JB, MB and LB were happy because they got to go outside after lunch. Both EB and KR were happy about the contents of their lunches, and AH was happy “because of lunch”.⁴⁵ Both AR and NH reported feeling less well when hungry—‘kinda in the middle’ and ‘angry’, respectively—and ‘super happy’ once sated.

It is noteworthy that participant RB, who was observed to adapt easily, demonstrated positive affect, and typically responded ‘super happy’ during wellbeing interviews, described feeling sad about not being allowed to talk during lunch at school. His childcare centre setting had had the most conversational lunch setting and he was able to describe how he also liked to have conversation at the dinner table with his family. His response demonstrated a substantial

⁴⁵ This was on the second day of observation in this class which was supervised by the classroom teacher and which the teacher described as unusually calm.

sense of loss of the opportunity for mealtime socialization in the school setting which was echoed much more subtly by other participants.

Additionally, it is interesting that the participant in one of the two dangerous lunchrooms, ZR, was ‘super happy’ during lunch, whereas a participant in the most effective lunchroom with a lone staff person—participant LR in the NE class at the Raspberry School—was ‘super sad.’ ZR described being happy to be playing “push-push-chair”, the game where she and other children were moving furniture while their peers tried to eat and finding it funny when her pasta fell all over the floor, leaving only snacks and treats for her to eat. By contrast, LR described being ‘super sad’ because the staff member had eliminated free play time due to the dangerous behaviour of some of the students.

Perceptions of the Kindergarten Eating Environment

Parent⁴⁶ perceptions of their children's eating in the childcare centre and concerns about the kindergarten eating environment

Parents' interest in, and understanding of, each of the eating environments varied. In Ontario, childcare settings that provide a nutrition program (as did each of the sites in this study) must comply with nutritional standards, post the menu in an area of high visibility and record each child's food consumption. As a result, parents and caregivers have access to extensive information regarding their child's consumption in the childcare eating environment. By contrast, there is no similar regulation in the school eating environment, children's consumption is not monitored or recorded, and parents and guardians have little or no information regarding the lunch period.

As part of the parent survey completed during Phase 1, parents of 13 participants responded to questions regarding their children's eating habits at home, their understanding of their children's eating habits in the childcare centre and their expectations regarding their children's eating habits in the kindergarten eating environment. With respect to the childcare setting, seven of the 13 respondents felt that their children ate differently in the childcare setting—six felt that their children were less picky and ate a wider variety of foods and one noted that “at home I know what she eats.” Observations in the childcare setting, evaluated against parent survey responses to their child's eating habits and child participant interview responses, demonstrated that more than half of the study participants ate a wider variety of foods in the childcare setting than they did at home.

⁴⁶ All children in this study were cared for by parents, therefore the study refers to “parents” rather than “parents and guardians”.

In response to open ended questions relating to the school eating environments, parent respondents expressed a number of concerns. Five respondents conveyed that they expected their children not to eat as well in the school. One parent explained,

“I think it is highly likely she will not eat as well as she did in the daycare setting” (mother of LR).

Three respondents worried that their children would not have enough assistance and support with eating, while another two worried about mealtime supervision. One parent linked these concerns,

“Jo eats best when supervised more closely. Now that he will be eating a packed lunch, I worry whether he will eat as well as he did in daycare.” (JoH’s mother)

One parent expressed hope that the lunch room would be a “calm setting” and another two parents worried that the children would not have enough time to eat. One of these parents, who also has older children in the school system, noted,

“She gets distracted. Concerned about such a young age group being put in a lunchroom environment with so many other children and only having a small amount of time to eat before being sent to play.
“Have a child going from grade 1 to grade 2. Lunchroom environment has been an issue. Not eating because ‘not enough time’ and ‘wants to play’ has been a concern. With Z being so much younger, I am really worried.” (mother of ZR)

Additionally, two respondents expressed concern about packed lunches, one noting,

“It’s going to be a big deal for me to learn to pack snacks and lunches and take more time and energy I feel short on” (mother of KR)—

and another two wished that their children could continue the lunch program offered through the childcare centre,

“Ideal would be if daycare continued the lunch program [in kindergarten]” (mother of LR)

One parent summarized it succinctly explaining,

“Honestly, food is the only thing I’m anxious about with M starting kindergarten—packing a healthy variety, containers you can open—you know, we never had to worry about this before because it was half day.” (mother of MB)

These responses are consistent with early childhood policy fellow Kerry McCuaig's⁴⁷ observations that, in focus groups, polling and one-on-one interviews with parents, food is parents' number one complaint (K. McCuaig, personal communication, May 6, 2015). In an interview McCuaig explained that in her work across the province of Ontario parents of kindergarten aged children, like the parents in this study, raised concerns about the quality of food during snack programs, rushed eating at lunch time, the quality of lunchtime monitoring, transitions during the lunch break and restrictions on socialization during the lunch time.

Staff Perceptions in the School Setting

During Phase 3, teachers, ECEs and lunchroom supervisors were eager to share their perceptions and concerns. Teachers at both the Raspberry and Huckleberry Schools conveyed their belief that children are not ready for full day schooling in junior kindergarten⁴⁸. Lunch was a particular concern with one teacher explaining that “lunch is just too chaotic. It’s too much for the children, juniors are just too young!” Another argued that “they should all go home for lunch,” describing that space, total number of children and staffing ratios are significant issues. Additionally, teachers at all three schools expressed concern regarding the quality of food the children bring in their lunches. Most poignantly, one teacher described a firm belief that there is a correlation between the quality of the lunch and behavioural issues, claiming “all I have to do is look at the lunch, and I know how they will do in terms of behaviour and school performance.”

ECEs in both the classroom and the lunchroom at each of the three sites expressed concern for the staffing ratios during the lunchtime. The lunchroom ECE in the north-east room

⁴⁷ Kerry McCuaig is the Atkinson Centre for Child Development early childhood policy fellow at the Ontario Institute for Studies in Education (OISE) and co-author of the Early Years Study 3 (McCain et al., 2011) and recent Early Childhood Education Reports (Akbari & McCuaig, 2014, 2017).

⁴⁸ In Ontario, Canada children are 3 to 4 years old while they are in junior kindergarten.

at the Raspberry School described frustration at not being able to properly implement their training as the only adult present during the lunch time. The classroom ECEs in the west room at the Blueberry School and both classroom ECEs in the single-participant rooms at the Huckleberry School gave up their lunch break expressly because of concerns for the safety of the children. Additionally, at the Blueberry School there was a student-teacher who was also a former ECE who outlined concerns regarding both the lack of regulation of the amount of space per child in the kindergarten environment and the lack of ‘continuity of care’. None of the staff present with the children throughout the day were present during their main meal. This student-teacher explained that, as a childcare centre ECE working with 3-to-4-year-old children, the staff closely tracked what children ate and how well they slept to better anticipate their behaviour throughout the day.

Some untrained lunch supervisors also expressed safety concerns. In the east room at the Blueberry School and the north-west room at the Raspberry School, the untrained lunch supervisors were eager to share their concern at not having received any training and their belief that the children require more support during the lunch time. Interestingly, only the staff of the two lunchrooms that were, in fact, chaotic and dangerous—the south-west room at the Raspberry School and the small classroom at the Huckleberry school on the final two observation days—did not express concern regarding the wellbeing and safety of the children during the lunch time.

Children’s First-Hand Experiences

Child participants reported positive feelings about their lunch experiences in the childcare setting. Of the six participants who were developmentally able to understand and respond to the

question, “do you like to eat at daycare?” during Phase 1⁴⁹, five reported that they like to eat in the childcare⁵⁰ setting while one noted that they preferred to eat at home. One participant exclaimed, “I happy eating lunch!” and other participants ate with great enthusiasm in the childcare setting, especially when compared with observations from Phase 3 (the school eating environment). Four of the participants who did not directly respond to questions about eating at “daycare” were observed asking for second, third and, even, fourth servings of lunch while they were at their childcare centre. Thus, five out of six participants offered enthusiastic responses, participants generally ate more enthusiastically in the childcare setting than they did in the school eating environment and four of the eleven participants who did not directly verbally respond demonstrated enthusiastic eating. Additionally, child participants’ self-reported wellbeing during lunch was almost unanimously positive. (The one negative response, WB1, came from a child who was crying for their mother throughout that day and the one neutral response, WB3, came from a child who only ever responded WB3 in all three phases of the study. Neither of these responses can be attributed to the eating environment. Child participants clearly demonstrated positive wellbeing through their words and eating.

In the school setting, by contrast, child participants expressed a variety of positive and negative feelings during the lunch time. Children’s interests and concerns regarding eating in the kindergarten setting were focused in three areas: time, socialization and choice. Research observations revealed the importance of mealtime modeling.

⁴⁹ Because of the very young age of the participants, their ability to understand and respond to interview questions evolved significantly over the course of the year-long study. During Phase 1 all participants were able to discuss food likes and dislikes, but many had a hard time thinking about where they had eaten and some were even unable to recall what they had just eaten. By Phase 2 most participants were able to speak about eating at lunch earlier the same day. In Phase 3 participants were interviewed while they were actually eating.

⁵⁰ The term “childcare centre” is the preferred terminology among early childcare researchers and policy makers, but the term “daycare” is the term that the children used. As a result, the term “daycare” appears in quoted dialogue with child participants, whereas the term “childcare setting” or “childcare centre” is used in all other cases.

Time.

The challenge most consistently observed and reported by child participants in the kindergarten lunch hour setting was insufficient time to eat. I observed that, with the exception of extreme weather days that kept children inside, kindergarten children were given 20-25 minutes to eat their lunches. On those observed extreme weather days, 10 to 15 per cent of the students took well over 45 minutes to eat their lunches even when activities for play had been set up 30 minutes into the eating time⁵¹. While most staff were under the impression that lunchtime challenges, like difficulties with containers, were resolved by the December holiday break, children in every classroom at every school in the study continued to seek assistance opening containers in Phase 3, January to June. Beyond the challenges of accessing their food, the children simply required more time to eat. None of the nine full-study female participants was ever observed to eat all their lunch. In fact, female participants rarely ate as much as half their lunch and six of the nine female participants independently raised the problem of not having enough time to eat. The male participants also had trouble finishing their lunch—of the eight full-study male participants, only one was ever observed to finish his lunch in the school setting—though the boys were less able to independently identify the reason. One female participant at the Blueberry School stated simply, “I didn’t have time to eat it,” and a female participant at the Raspberry School explained:

LR: I eated. I wanna eat everything...but every sometimes I, I can’t eat anything, um everything ‘cause some of, ‘cause they say it’s tidy up time for the lunch.

JAB: Yeah, so sometimes it’s not enough time to get everything eaten, even though you want to?

LR: Yeah...

⁵¹ ECEs noted that when activities are available, some children may not have the self-regulation to eat until sated and will choose to play instead.

JAB: It's not enough time?

LR: Never, never it's enough time.

JAB: So how does that make you feel?

LR: ...this sad. [indicates sad/2WB on the wellbeing chart]

JAB: This sad, a little bit sad?

LR: And we're, when I get ta, get to happier, I get the, when I'm happy I get to eat all of my things it's this one. [indicates happy/4WB on the wellbeing chart]

JAB: Right. Do you sometimes get enough time to eat everything?

LR: [shakes head no]

JAB: Never?

LR: Never.

And a male participant at the Blueberry school explains that he eats his "favourite things" first (treats) and "when I am gonna eat the thing I don't like [the 'main meal'], it is time for us to put away our lunch." Children expressed anxiety about not "finishing" their lunches. Parents of study participants and from informal interviews said that over the course of the kindergarten year they amend the content of their children's lunches to include increasing proportions of convenience foods due to growing concerned about whether or not their child is eating enough at school. And, teachers, class room ECEs and after school care staff describe working to structure additional opportunities for children to eat their lunches later in the day. Some children confided that "by the end of the day" they can eat all their lunch. Nevertheless, caregivers and other interviewees repeatedly expressed frustration and, in some cases, anger that these very young children are given so little time to eat with little or no guidance during the meal time.

Socialization.

During lunch in the kindergarten classroom, children have time to socialize with little guidance because there is one adult supervising 24 to 33 three-to-five-year-olds. Both lunchroom and teaching staff report that the girls are “often very conversational” and identify this as a problem because they converse in lieu of eating. As a strategy to limit these conversations, one LS ECE establishes a seating plan that alternates girls and boys, while in many other rooms specific girls are separated from one another. While study observations do support staff reports that girls, in particular, find that there is not enough time to eat, teaching children that mealtime is a time to eat and not socialize is not an optimal approach. In fact, a male participant noted feeling sad about not being allowed to talk at lunch.

JAB: Now that it's lunchtime, how are you feeling?

RB: ... ummm... ummm... [makes a sad face, indicates super sad/1WB]

JAB: Super sad?

RB: 'naqui' [indicates sad/2WB on WB chart]

JAB: A little bit sad? Why are you feeling a little bit sad?

RB: Because we can't talk at lunchtime.

JAB: You're not allowed to talk at lunchtime and that makes you feel sad?

RB: [nods yes]

JAB: Do you like it when you eat at the dinner table? Do you talk at the dinner table at home?

RB: Yeah.

JAB: Yeah, is that one of the things you like about that?

RB: [nods yes]

JAB: But you're not supposed to do that here at school... and now here I am talking to you at the lunch table.

RB: [giggles]

JAB: So you feel a little bit sad or a lot sad? At first you said a lot sad, then you said a little bit sad.

RB: [indicates sad/2WB]

JAB: Just a little bit sad.

RB: Yup.

Due to the time constraints of the school lunch time, conversation is a problem to eradicate to facilitate efficient eating. Children experience this as a loss and it represents a lost opportunity for mealtime socialization among peers.

Choice.

Child participants consistently valued the choices they have over what they eat over the course of the school day. Through the study, all child participants (both the 17 who participated for the full year and the four who participated in one or two phases) demonstrated a clear sense of their food likes and dislikes and a desire to have their eating preferences respected, whether at home, in the daycare setting or in the school setting. During Phase 2 (P2) and Phase 3 (P3), eight of the 17 full-study participants independently indicated that they were either “happy” (WB4) or “super happy” (WB5) because they got to choose some of the items in their lunches. One participant at the Raspberry School exclaimed, “I really like when I choose,” and another, at the Huckleberry school explained that they like bringing lunch from home “because it tastes better!”⁵² When asked, all participants confirmed the preference for having choice.

Many participants like their brown bag lunches because their parents pack candy, cookies and other treats that were not available to them in the daycare setting. A subset of 3 participants

⁵² Child participants suggested that foods they had chosen themselves tastes better.

described as “behavioural” by the teaching staff commented consistently about candy and chocolate in their P2 and P3 interviews. One participant at the Huckleberry School described themselves as “angry before lunch because I wanted to eat everything” and, later, “happy at lunch because I love candy.” Furthermore, the child participants’ delight at having choice is sometimes accompanied by feelings of sadness or anger when parents pack items that the child does not prefer. For example:

JAB: Okay, so when you think about eating lunch at school, how do you feel?

KR: Sad, sad and happy, happy.

JAB: How come sad and how come happy?

KR: It’s because sometimes my mom puts things that I really like and some things that I kinda do like and some things I don’t like really much and sometimes things that I don’t like a little bit.

JAB: So which things in your lunch make you sad, sad?

KR: When my mom packs me bad things.

JAB: Bad things like what?

KR: That are poisonous.

JAB: Hm. Your mom packs you poisonous things, does she?

KR: Sometimes. But I put them back in my lunch basket until... when I get home I tell her.

JAB: Like what? Do you remember any of the things?

KR: Poison in... bags that are filled with poison all out.

This particular child was described by the mother as “a picky eater” and, in the conversation above she is talking about her egg-salad sandwich. In the childcare setting, however, with an adult role model eating with the children and peers all eating the nutritious foods offered, this child ate a wider range of foods than at home and was observed happily eating egg salad sandwiches (see food consumption table in Appendix I). Once in school, the parents started the

year sending sandwiches, veggies and fruits that would all come home uneaten. By full day observation day in January, the child came to school with a lunch consisting of cheese strings, sweetened yogurt, chocolate cookies, apple slices and lemonade—the child ate neither the cheese nor yogurt and informed me that she would tell her mother that she doesn't like them. Five of the 17 full study participants demonstrated a similar trajectory of shifting eating habits from fresh foods towards nutrient-poor, calorie-dense food over the course of the transition from childcare to FDK. While children value choice in their consumption habits, the lack of support in the school eating environment has been observed to reduce the quality of food in packed lunches. It seems that, while child participants value choice, these young children require structure and modeling of healthy choices.

Mealtime Modeling

While the DNA and its successor, the CCEYA, set out parameters to ensure that the daycare eating environment provides mealtime modeling by trained adults of food that meets nutritional standards, the school eating environment offers nothing comparable. In the daycare setting, children sit in small groups with nutritious foods offered employing a technique referred to as “sequencing” [as described in Section 3.2 Site, Setting and Self-Reported Wellbeing]. First, when children are most hungry, an array of fresh vegetables is offered, then a main course of starch and protein is offered, and finally fresh fruit. At each stage, children have choice about what they take and can serve themselves. Additionally, at the Blueberry Childcare Centre, staff ate the meal with the children, modeling mealtime behaviour and guiding quiet conversation using the “family-style mealtime” recommended in the literature (Fletcher et al., 2005; Mita et al., 2015). In all cases, staff were observed communicating with children about healthy foods

while eating meals that met the nutrition guidelines set out in the provincial policy. Study findings support the relative efficacy of the models employed in the childcare centres of this study.

By contrast, there were few, if any, opportunities for mealtime modeling and nutrition education in the kindergarten setting. Both classroom teachers and classroom ECEs were on break during the lunch hour, which is not considered instructional time by the Ontario Ministry of Education. Among the observed classrooms with a structured snack program, none of the supervising staff participated in the snack. Additionally, every one of the kindergarten teachers interviewed expressed concern over the quality of food the children bring in their lunches and many expressed anxiety regarding how to encourage better choices. One teacher at the Raspberry School described sending a letter home to parents at the start of the school year encouraging them to “send healthier food,” but felt that this approach was minimally effective. Another teacher at the Huckleberry School teaches nutrition to the students by making collages of healthy versus unhealthy foods in the early part of the school year and feels that this approach is effective because “the kids tell the parents they want healthier foods”. As outlined above, however, parents and guardians sometimes sent lower quality foods because they worry their children are not eating enough at school. It is clear, that the transition from childcare to school involved a loss of opportunity for mealtime modeling and in-situ nutrition education.

The Central Role of the ECE

In the Classroom

As originally proposed in *Our Best Future* (Pascal, 2009) and elaborated in the *Early Years Study 3* (McCain, Mustard, & McCuaig, 2011), the full-day program would seamlessly integrate teachers and early childhood educators (ECEs) in a community hub where children would “spend their day in a consistent environment, with the same adults, all with the same expectations” (p. 10). In Ontario, the FDK program was deliberately structured with complementarity in the roles of the classroom teacher and ECE, wherein the former brings knowledge of elementary curriculum and the latter brings knowledge of early childhood development (Underwood et al., 2016). However, implementation has not lived up to this standard and, in the TDSB in particular, the structure of contracts and union relationships has, in many cases, relegated ECEs to a secondary status which, in turn, has excluded them from contributing to planning and class design (K. McCuaig, personal communication, May 6, 2015; Rachel Langford, Di Santo, Valeo, Underwood, & Lenis, 2018). At the same time, some individual school principals who have recognized the value of ECEs and their developmental education skills have managed to cultivate a collaborative atmosphere between classroom teachers and classroom ECEs. Regardless of class size or other factors, in this study, it was those classes in which the teacher and ECE work together to plan and structure both the day and the classroom that functioned the most smoothly, pointing to the central role of the ECE for the well-being of the children in this study.

The study involved childcare-centre–school pairings at Blueberry, Raspberry, and Huckleberry schools, with participants in two classrooms at Blueberry School, three classrooms at Raspberry school, and three classrooms at Huckleberry school (see Table 12).

Table 12: Participant distribution in kindergarten classrooms and lunchtime supervision.

Site	classroom	# of students	# of full-study participants	Lunchtime supervision
Blueberry	East	26	4	Untrained
Blueberry	West	24	3	Untrained
Raspberry	North-East	33	2	ECE
Raspberry	North-West	33	1	Untrained
Raspberry	South-West	32	1	Untrained
Huckleberry	North	28	1	ECE (B&A*) + classroom ECE and teacher
Huckleberry	East	28	1	ECE (B&A) + classroom ECE
Huckleberry	North-West	14	4	1 ^{st**} : ECE (practicum incomplete) 2 nd : classroom teacher 3 rd & 4 th : untrained

* B&A= staff in Before and After School Care program

**1st= first observation day, 2nd= second observation day, etc.

At the Raspberry School, the principal helped to foster a solid collaborative approach between the teachers and classroom ECEs and, despite having by far the largest classes in the study, these were the smoothest running. Classroom ECEs were observed having opportunities to lead activities, classroom teachers were observed collaborating on in-the-moment decision making, teachers described how implementing ECE strategies at snack time, for example, had been effective, and both teachers and ECEs were observed working with the students in small groups.

In contrast, at the Blueberry School, the ECEs functioned as teacher assistants. One of the two classes functioned fairly smoothly when a student teacher was present as a contributing member of the teaching team. This student teacher was a former ECE who had worked full-time with preschool- and kindergarten-aged children in a Toronto childcare centre. Unlike the classroom ECE, the student teacher was given opportunities to guide the classroom and, in fact,

was observed to engage a participant who appeared disinterested in teacher-led activities. The student teacher attributed the ability to engage the children to previous ECE training (MS, personal communication, March 5, 2015).

In the other class at Blueberry School, the presence of a strong teacher was often insufficient to keep the class engaged, and during centre time many of the typically popular stations—like the water table, science centre, and crafts table—remained entirely vacant while the students’ attention was drawn to the Promethean board, an interactive white board which showed children’s music videos and cartoons. At one point the teacher had given a participant a “double time out” for reasons he could not recall. The participant described feeling “super sad.” In this class, too, the classroom ECE functioned as a teacher’s assistant, setting up materials but not contributing to decision making or meaningful engagement with the students as a group.

The importance of the ECE was, perhaps, most evident in the one classroom with no ECE. At Huckleberry School, four participants were in a class with only 14 students, one teacher, and no ECE. This was the smallest classroom in the most affluent of the three schools, and it was also by far the most chaotic classroom in the study. On observation days, the three male participants each initiated two to four violent interactions with their peers every hour and were described as “behavioural” by both the classroom teacher and other teachers (drama and library). Because there was only one trained adult in this classroom, the teacher spent large portions of her time managing the particular needs of these students. Though she did employ a range of techniques to engage the students, such as starting each day outdoors all year long, teaching lessons outdoors, offering leadership roles, incorporating games like Simon Says into routines, and using both breath work and visualization mindfulness practices, each of these children was sent to the office at least once during observation.

It is worth noting, however, that none of the three boys described as behavioural by the school staff had demonstrated a similar level of aggression in the childcare setting. During Phase I, one of the boys demonstrated deep sadness over separation from family members, sometimes crying throughout the day, consoled only by the close nurturing of one of the ECEs, and another cried easily and often throughout all phases of the study, showing a profound emotional concern for the natural world and animals. While both of these children were observed to be frequently physically violent and threatening to their peers in the school setting, neither had engaged in a single violent altercation during observation days in the childcare setting just a few months earlier. The third boy had demonstrated aggression in the childcare setting, but it was sufficiently infrequent that it did not receive special attention. The FDK program is meant to provide students with fluidity of care in an educational setting where the teacher offers curriculum and the ECE offers “age-appropriate program planning that promotes each child’s physical, cognitive, language, emotional, social and creative development and well-being” (Ontario Ministry of Education, 2011b). The stark contrast in the “behaviours” of these three children suggests that the absence of an ECE to support emotional and social well-being may have a more significant impact on some children than on others.

The other two classrooms at Huckleberry School, each double the number of students (28 students), were staffed with both a teacher and an ECE. In the east classroom, the ECE was observed tending to a participant’s wound from a fall in the playground, spending well over 10 minutes with him to ensure that he felt better both physically and emotionally before he returned to play with his peers. This same ECE was later observed to advocate for children during gym class, engaging a male participant when he was reluctant to participate and advocating for other students when the physical education teacher denied them water and washroom breaks. In the north classroom, the ECE was observed helping the students and the supply teacher follow

classroom routines on a day when the regular classroom teacher had a training program. On multiple occasions, this ECE soothed distraught children and helped the supply teacher better understand their needs.

Full-day observations, to gain a better understanding of participants when they were hungry, eating, sated, or otherwise, revealed the essential role of ECEs for child well-being in full-day care settings. In classrooms where the ECE played an active role in planning and structure at both Raspberry and Huckleberry Schools, children engaged in activities and were well supported when they could not. In the one classroom at Blueberry School, where the ECE was employed as a support staff, centre time appeared dominated by screen time rather than experiential learning, and a participant described receiving a punishment to which he could not ascribe meaning. Finally, in the one class with no ECE whatsoever, three of the four participants demonstrated ongoing signs of distress and exhibited a level of violence inconsistent with their behaviour in the childcare setting. The full-day observations within the classroom setting revealed both the ECEs' unique ability to promote the children's overall well-being and the importance of having two trained adults who are familiar with the children present at all times.

The Lunch Hour (53)

There are no minimum training requirements for school lunch staff. Because the lunch supervisor position is 1 hour in the middle of the day it can be very difficult to staff (MD, personal communication, October 29, 2015). Furthermore, key informants noted that because lunchtime is not instructional time, it was sometimes viewed as an “afterthought” because “it’s

⁵³ Note: there is some repetition of subject matter in this section (in particular with respect to staffing), but it is retained to maintain the integrity of the findings section in the published article, Well-being in the Kindergarten Eating Environment and the Role of Early Childhood Educators (Bas, 2017).

only an hour” (personal communication, MD, October 29, 2015; AS, December 1, 2015; CB, February 22, 2017). This, however, is a significant departure from what was intended by the architects of FDK. Indeed, the policy recommendations for staffing clearly outline that “the schedules of the (two classroom) ECEs should overlap during the children’s lunch period to allow for lunch breaks for the staff while maintaining a learning environment for the children” (Pascal, 2009, p. 61). Far from an afterthought, lunchtime in the FDK program was meant to be supported entirely by trained staff to support the children’s well-being and mealtime socialization.

In the childcare setting, current regulations require that staffing ratios are 1 staff member for every 8 children, with a maximum of 16 children per room in a preschool room (children ages 2.5 to 6 years) and 1 to 13 with a maximum of 26 children in a kindergarten room⁵⁴ (children ages 3.5 to 5.5 years). During Phase I, study participants were in preschool rooms at their respective childcare centres with a 1:8 staffing ratio and a maximum of 16 children. At Blueberry Childcare Centre, attending staff sat and ate with children at two U-shaped tables while other staff brought food into the room. While staff “sequenced” the food, serving a course of vegetables first, followed by a course that included starch, a protein, and finally fresh fruit at the end, children were offered choice, had the opportunity to serve themselves, and engaged in conversation with their peers. Staff offered guidance, such as reminders to ask to pass dishes rather than reach across the table. Child participants unanimously reported feeling “super-happy” during lunch, and parents reported that their children ate a wider variety of “healthy” foods than they did at home. Similarly, at Raspberry Childcare Centre, staff who were not the attending staff brought the food to the room while children sat at two rectangular tables, each with an attending

⁵⁴ Preschool room regulations under the Child Care and Early Years Act remain the same as they were under the Day Nurseries Act (in its final year at the time of the study), though kindergarten room regulations have gone from a ratio of 1:10 with a maximum of 20 children to 1:13 with a maximum of 26 children (see Appendix A).

staff member standing nearby, serving food, and reminding the children to eat. Child participants at this site reported feeling “in the middle,” “happy,” and “super happy” during lunch. At Huckleberry Childcare Centre, staff were responsible for final-stage food preparation and, as a result, primarily interacted with the children to serve food and to separate “disruptive” children when necessary. In this setting, child participants reported feeling “angry,” “nothing,” and “super happy” during lunch. Phase I findings suggest that, within the childcare setting, child participants most enjoyed the opportunity to share a meal with staff while being offered both choice and guidance, as was the case at Blueberry Childcare Centre.

In the school setting, in the absence of guiding policy, lunchrooms of up to 33 children were staffed by a single adult. In some cases, the lunch supervisor was an ECE and in others, untrained adults. During Phase III, the setting was often a loud and chaotic one in which the children had difficulty eating and where disruptions and altercations sometimes became violent. In these cases, the question of optimal eating environment, so present in Phase I, was superseded by the questions “Are the children able to eat?” and “Are the children safe?”

At the Raspberry School, one of the lunchrooms was supervised by a trained ECE who was also a staff member in the before- and after-school care program provided by the childcare centre on site. Though this ECE described challenges as the only staff member and because the children only had about 20 minutes for the lunch, the room she supervised was without incident on observation days. The ECE explained that there had been a steep learning curve in the fall for both herself and the students. However, as she got to know the children, she was able to implement her training to establish seating arrangements which paired children who had an easy time with the routine with those who did not. This enabled her to focus guidance on those children who had the most difficulty or were the most likely to disrupt their peers. In addition

this ECE-trained lunch supervisor structured calm activities for those children who tended to eat very quickly (so that those who were still eating were not drawn to play in lieu of eating), arrived early to coordinate toileting time, and consistently maintained an even and instructive tone during emergent incidents. The child participants in this room reported feeling “in the middle” and “sad” during lunch, though relative to other kindergarten lunchrooms children were both safe and able to eat.

The other two classrooms were supervised at lunch by untrained adults. In one case, the lunch supervisor (LS) was the parent of a child at the school, and in the other, the LS was the grandparent of a student. The first LS explained that, feeling very overwhelmed at the start of the school year, she had independently undertaken to read as much as she could about child development of 3- to 5-year-olds and strategies for “managing” classroom dynamics. Of the lunchrooms supervised by untrained adults, this was the most effective insofar as while the room was messy and loud, the children were safe. That said, the LS managed the lunchroom at the expense of assisting opening containers and offering children guidance. The room was not dangerous, but the children did not receive the adult attention they required. The LS in the other room was both kind and hardworking, but during observation the lunchroom descended into chaos when one child had a toileting accident in the washroom requiring her full attention. Over a short period of time, mounting numbers of children became distressed at not being able to use the rest room. At the same time, two separate altercations among five students distracted other students, most of whom were then unable to eat. The one participant in the room joined a group of her peers rearranging the furniture, dragging the children who were still eating around the room in their chairs. The participant in this room reported feeling “super happy” and appeared more energetic than she did at any other time that day, perhaps indicating a need for more unstructured play time. That said, she ate less than a quarter of her lunch. In fact, few children

ate that day and, later, the classroom ECE noted that the children were “always more hungry for afternoon snack.” In contrast, in classrooms where the lunchroom environment was conducive to the children eating lunch, few children participated in afternoon snack.

Neither of the two kindergarten classes at the Blueberry School had trained lunch hour staff. In one class, the lunchroom was supervised by a parent of a child at the school, and the other by someone who lived nearby. In addition, both rooms had students from older grades in the kindergarten lunchrooms who were meant to assist the younger children but only occasionally did so. In the east classroom, supervised by a parent, there were no significant safety issues, but the majority of the children were not able to eat even half of their lunch during the allotted time, and child participants reported negative feelings about this. While this was not among the most challenging lunchrooms in the study, the LS in this room engaged me in a lengthy conversation, eager to express concern over the functioning of the lunchroom, centered around the belief that “it is essential that there be better staff-to-student ratios during the lunch hour.” The LS in the other lunchroom was not able to effectively communicate with students because of limited English skills and instead spent the lunch time cleaning. Based on observations, it seems that the staff at the school was aware of this situation and made efforts to supplement the formal supervision, though there was no verbal confirmation of this. On observation days, both the classroom teacher and the classroom ECE gave up their own lunch break to assist in supervision. Another teacher from the school came to relieve the classroom teaching staff on two separate occasions. Additionally, the school principal spent part of the lunchtime with this classroom on each observation day. When asked, child participants reported that these adults were in the classroom at lunchtime “always,” “mostly always,” “most of the time,” and “it’s always like this.” The older students in this classroom actively engaged the kindergarten students, though this engagement seemed to increase in the presence of the

principal and classroom teacher. All of this suggests that the school staff were working together to manage what appeared to be a suboptimal staffing arrangement. Unfortunately, even with this level of oversight, the classroom LS offered me chocolates with nuts on three separate occasions in a school with a kindergarten student having an anaphylactic nut allergy. The seriousness of this failing cannot be overstated, especially because it is part of the lunchroom supervisor's job to ensure adherence to the TDSB's "peanut-free zones" policy when there are children with severe allergies present.

At the Huckleberry School, both classrooms with only one participant were supervised at lunch by an ECE, and the small class with four participants was supervised for the first six months by someone who had completed the ECE program coursework but not the practicum and for the last four months by an untrained adult. In the north classroom, both the classroom ECE and the classroom teacher joined the LS ECE to ensure that the students had a strong team and continuity during the lunch hour. This was by far the best-staffed room in the study, as the LS ECE was also a staff member in the before- and after-school care program run by the childcare centre in the building and the teacher was willing to donate her time on a day when she was engaged in training elsewhere in the building. The "seamless care" approach was in action here, and the lunch hour was relaxed and comfortable, though this came at the expense of the lunch break of the teaching team. The other kindergarten classroom, also staffed with an ECE-trained lunchroom supervisor (who was also a staff member in the before and after school care program) and the donated time of the classroom ECE, was similarly calm and without incident.

Again, the one class of only 14 students offers an interesting case because it was the only lunchroom in which the same students were observed with both (partially) trained and untrained staff. There was one observation day in February, while the trained LS was still in place. On this

day, while there were significant challenges during the regular class hours, the lunchtime ran smoothly. The LS explained that initially, “lunch was crazy. I can’t explain it, it was just crazy.” The LS explained that they had established a seating arrangement (with as few as two students to a table and none of the challenging students seated together) and a handwashing and washroom routine that staggered the children based on each one’s pacing. The LS said that “it took about a month and a half to get it sorted” (personal communication, February 11, 2015). On that observation day, there were no incidents during the lunch hour and the lunchtime was calmer than it had been during instructional time with a relaxed eating environment.

The lunchroom observation days when supervised by an untrained adult show a different picture. On one of the three days, two of the challenging students were absent and the LS was late enough that lunch was almost entirely supervised by the classroom teacher. While this lunch hour was relatively smooth, the classroom teacher described that day as atypical, repeatedly telling me, “it’s so quiet today because two of the major players aren’t here. This never happens!” (personal communication, May 19, 2015). According to the classroom teacher, the relative calm could be attributed to the absence of two of the “disruptive” children, though lunch had also been quite calm in the presence of an ECE-trained lunch supervisor. The lunch hours on the other two observation days were described as typical for that room and were both consistent with the classroom challenges and with the other lunchrooms supervised by untrained adults. In other words, there was an escalation of disruptive and dangerous behaviour during the lunch hour. For example, on one day a male participant aggressively chased a female student around the room, and when he caught her, he pulled her to the ground by the back of the neck, mounted her, and searched her pockets. He explained later that he believed she had stolen candy from his backpack. This was not the only violent altercation this student initiated during the 20-minute lunchtime supervised by an untrained adult, but it was the only one the lone staff member

observed. On the other observation day, the participant being observed had a very difficult time coping in the absence of a familiar adult. Though he was slightly less aggressive with his peers than he had been during instructional time, he did not eat anything at all, he knocked other children's food to the ground, he knocked down the building structure a peer had left to work on after lunch, and he cried deeply and could not be consoled by the lunch supervisor. It was clearly an extremely difficult 20 minutes for this child. A typical lunch hour in this atypical classroom supports the findings from the other lunchrooms in the study: that kindergarten children require support from familiar trained staff during the lunch hour.

Overall, regardless of class size or the typical behaviour of the students in the classroom, those lunchrooms supervised by a trained ECE functioned much better than those supervised by an untrained adult. That said, it is important to note that every ECE-trained lunchroom supervisor stated that the lunchrooms are severely understaffed, based on the needs of 3 to 5-year olds. The lunchroom ECE at Raspberry School elaborated that they were unable to properly implement their training due to too many children in a small space, inadequate staff-to-student ratios, and insufficient time for children to eat (personal communication, January 29, 2015). Nonetheless, when compared to lunchrooms supervised by entirely untrained staff, ECEs were at least able to create a safe environment in which the children could eat. There was a structural suboptimality to lunchtime, which the ECEs are able to partially mitigate, but this by no means represented a best practice.

Setting the Tone

The relationship between the teacher and the ECE in the classroom and the structure of the lunchroom setting are significantly impacted by the direction set by the principal. According to the literature, the principal is the single most important factor in school effectiveness

(Bartoletti & Connelly, 2013; Smith, 2016; Williamson, 2011). Additionally, key informant interviewees underscored the central role of the principal (personal communication, MRB, June 25, 2015; GT, June 25, 2015; E, June 23, 2015) and suggested that principals have considerable leeway in structuring both the budget and the timetable for staff, with considerable direct impact on the classroom environment (personal communication, LB, April 27, 2015; MD, October 2015; JB, November 22, 2015), thereby establishing the parameters of staffing and staff-to-student relationships (personal communication, LB, April 27, 2015; MD, October 2015; AS, December 1, 2015). As the librarian at Blueberry School noted, “the whole school culture reflects the principal’s leadership” (personal communication, April 27, 2015). This is consistent with observations throughout the study. While this is a qualitative study with a small sample size, because there were participants in multiple classrooms at each school, a pattern was visible that children benefitted from the input of the classroom ECE in those settings where a balanced teacher–ECE relationship was fostered. This finding is consistent with the literature (Corter et al., 2012; A. Gibson, Pelletier, & Jackman, 2010; McGinty, Justice, & Rimm-Kaufman, 2008).

Throughout the course of the study, key informants described the benefits of the fluid care model, and one key actor described how this model was implemented during the lunch hour at their school. Kerry McCuaig, Fidelia Torres, and the student teacher and former kindergarten-age ECE all echoed the importance of seamless transitions and fluid care that were outlined in Pascal’s (2009) *With Our Best Future in Mind* (personal communication, K. McCuaig, May 6, 2015; F. Torres, June 18, 2015; MS, March 5, 2015). The student teacher explained that during their years as an ECE, the staff closely monitored what children ate (as is required by regulation) and would gain a sense of “how they [the children] would be able to manage in the afternoon” (personal communication, MS, March 5, 2015). Through developing close relationships with the children and always having a trained staff person well known to each child in the room, the staff

in the childcare centres could better anticipate and respond to the children's needs. Another key informant, a kindergarten teacher whose assignment was relief staff for all five kindergarten teachers at their school, described a solution to their lunchroom staffing challenge. At their informal weekly lunch hour meetings, the kindergarten teachers came up with a proposal that classroom teacher and ECE lunch breaks be staggered so that every day, every kindergarten lunchroom would be staffed by both a lunch supervisor and one member of the regular classroom teaching team. The principal agreed, and the teaching staff reported that the situation had "improved" (MD, personal communication, October 29, 2015). This third-party report suggests that kindergarten students at this school benefitted from the principal's willingness to implement this teacher-driven strategy.

That said, this is but a single case within a much larger system. Additionally, whether assessing the impact of principals, teachers, ECEs, or lunchroom supervisors, it is important to bear in mind that great people can sometimes transcend structural weaknesses. Consequently, it is important not to conflate the efficacy of an extraordinary individual working in a poorly designed system with programmatic success. Indeed, the goal here is to identify the problem areas and best practices in order to benefit all students. One challenge, as both the teacher from the small classroom at Huckleberry School and the teacher from the aforementioned example have noted, is that parents remain unaware of what the problem areas are, and consequently cannot advocate for programmatic change. Indeed, one parent of a child participant described enquiring about the lunch hour, finding staff responses evasive, and feeling that "the whole thing is shrouded in mystery" (personal communication, BMP, October 2014). What is frightening, is that this secrecy may be intentional. One interviewee, a kindergarten teacher in the TDSB, described someone from the Ontario Ministry of Education Early Years Branch specifically instructing the kindergarten teaching staff at their school to "not be too specific" in response to

parent concerns about the lunch hour, explaining that “we want this to sound good.” The interviewee went on to say “Why don’t the parents know? Because the school knows it’s bad... I don’t think it’s okay. I want parents to understand that it is hard to keep them [the children] safe with these parameters” (MD, personal communication, October 29, 2015). These sentiments—that it is up to the parents to lobby for change, on the one hand, and that parents are kept, in the dark, on the other—echo throughout the key informant interviews. It is clear is that there is a need for both further research and greater transparency in order to have a meaningful dialogue and establish best practices for the kindergarten eating environment.

PART 3: Discussion and Conclusion

Discussion

Part 3 includes the discussion sections of each of the three manuscripts—Sites, Settings & Self-Reported Wellbeing, Perspectives of the Kindergarten Eating Environment, and The Central Role of the ECE—and the conclusion, policy recommendations and limitations of the study, followed by suggestions for further research, which is also informed by the contextual findings presented in Part 2.

Sites, Settings and Self-Reported Wellbeing

This section outlines the best observed practices in the childcare centre and school eating environments based on study observations, children’s self-reported wellbeing and the literature.

Phase 1.

While all 3 childcare centre sites offered effective eating environments for the children, the setting at the Blueberry Childcare Centre was the most effective. The set-up, with a staff-member sitting with the children without interruption at a U-shaped table where each child had an assigned seat, enabled the attending staff member to use sequencing and modeling approaches to promote healthy eating habits while still allowing the children choice, the opportunity to serve themselves, and some structure to practice mealtime behaviour. These children ate a wider variety of nutritious foods at the childcare centre than they did at home and almost unanimously reported feeling ‘super happy’ during lunch. Consistent with the literature on positive mealtime environments (Fletcher et al., 2005; Kok, 2015; Mita et al., 2015), both observations and child assessments support the finding that this was the single most effective eating environment observed during the course of the study.

The Raspberry Childcare Centre offered an effective eating environment, though because the staff were not eating with the children they were neither able to model mealtime behaviour nor be a part of the mealtime social setting. The children had a seating arrangement and were given some choice about how food was served to them, but the sequencing technique was not used. None of the children expressed dissatisfaction about mealtime.

Comparatively, the setting at the Huckleberry Childcare Centre was the least effective of the childcare centre eating environments. Without a seating arrangement for all children, staff singled out those deemed to be 'difficult'. They were separated from the other children, placing them at risk of experiencing social exclusion. Additionally, because this childcare centre did not have the same level of support staff as the other two childcare centres, the children received less attention to positive mealtime behaviours and did not benefit from sequencing or modeling approaches. On multiple occasions staff were observed telling children that they had to eat specific, less favoured portions of their meal in order to receive preferred portions, an approach which has been linked to negative associations with food and reduced consumption of targeted foods (Galloway, Fiorito, Francis, & Birch, 2006; E. L. Gibson et al., 2012; Robert Batsell et al., 2002; Ventura & Worobey, 2013).

Phase 3.

Lunch.

Phase 3 assessed seating arrangements and staffing during the lunch hour. In six of the eight lunchrooms observed over the course of the study, seating arrangements were employed. Two trained lunchroom supervisors (in the north-west room at the Raspberry School and the

lunchroom supervisor in the small, south-west room at the Huckleberry School on the first day of observation) and two untrained lunchroom supervisors (in the north-east room at the Raspberry School and in the east room at the Blueberry School) described that establishing a suitable seating arrangement had taken time and, ultimately, had helped to make the lunchroom dynamics more manageable. The untrained lunchroom supervisors in the rooms where children were observed to be at risk (the south-west room at the Raspberry School, the west room at the Blueberry School, and the north-west room at the Huckleberry School on the third and fourth observation days) did not volunteer to speak about either seating arrangements or the safety of the students in the lunch room. At the same time, the two lunch rooms without any seating arrangement (the north and east rooms at the Huckleberry School) were both safe and effective, though it is noteworthy that these rooms were staffed by a combination of an on duty early childhood educator and members of the regular teaching team who were donating their time.

It is possible that a well-devised seating arrangement could contribute to student safety, as was argued by the lunch time staff of the four effective rooms using seating arrangements, but results are inconclusive. Because the majority of the students in the classroom were not participants and, consequently, could not be observed as part of the study, it remains impossible to assess the quality of the seating arrangement implemented. Therefore, in the two rooms⁵⁵ with seating arrangements where risks were observed as a result of student interactions (the south-west room at the Raspberry School and the north-east room at the Huckleberry School on the third and fourth observation days), it cannot be determined whether this was as a result of poor seating arrangements or other factors.

⁵⁵ In the third room where risks were observed (the West room at the Blueberry School), the risks were a result of the on-duty staff breaching the anaphylaxis policy and therefore bear no relevance to the question of seating arrangements.

At the same time, every room supervised by a trained adult was observed to be safe and those rooms supervised by multiple trained adults did not require a seating arrangement to achieve this. Thus, while the staff of four of the safe lunchrooms felt that they had achieved safety with a seating arrangement, seating arrangements proved to be an insufficient condition to ensure student safety in three of the kindergarten lunchrooms. By contrast, all lunch rooms supervised by staff trained in early childhood education (the north-west room at the Raspberry School, the north-west room at the Huckleberry School on the first day of observation, and the north and east rooms at the Huckleberry School) were safe, though, in cases where only one staff was present (as in the north-west room at the Raspberry School) the emphasis on having the children eat efficiently contributed to the participants' negative experiences at lunch time.

Snack.

In each of the three study schools snack was operated using a combination of a structured and a self-regulation approach. According to teacher reports, decisions about how to organize snack time were based on factors including scheduling (to coordinate with students going to gym, music, library or other classes), the amount of time children take to eat, and a desire to promote opportunities for self-regulation, as outlined in the Ontario Ministry of Education's Kindergarten Program (Ontario Ministry of Education, 2011b, 2016b). Three classrooms always used a self-regulation approach, offering snack as a station during centre time, (the north-west classroom at the Raspberry School and the north and north-west classrooms at the Huckleberry School) and one class room used this strategy all day on "days 2 and 4" of their 5-day class schedule (the east room at the Blueberry School). While some participants were able to effectively self-regulate using this model, challenges were observed. Participants in two of these

class rooms ate a large snack during morning centre time, just before lunch and were not hungry during the lunch time. One of these children was observed to be disruptive and violent during lunch while the other complained of being hungry immediately after lunch. In the class where the self-regulation approach was only employed two days a cycle, participants were observed to be too distracted to eat during centre time. There was one room where the exclusive use of a centre time approach appeared to be effective on observation days (the north-west room at the Raspberry School), though in this and another room (the north-west room at the Huckleberry School) non-participants were observed late in the day reporting to the teaching staff that they were hungry after the snack station had been closed.

The use of a structured approach all day was observed four times (one of the observation days in the east classroom at the Blueberry School, one of the observation days in the north-east classroom at the Raspberry School, the one observation days in the south west-class at the Raspberry School, and the one observation day in the east classroom at the Huckleberry School). In the first two cases, the school snack was offered in the morning and the children snacked from their packed lunches in the afternoon. In the third case, the order was reversed and in the fourth case students ate from their lunches in both the morning and afternoon because there was no snack program available. The use of a structured approach for both morning and afternoon was effective and gave children the opportunity to have a shared mealtime with the supervision of their regular teaching staff, though it did not generate opportunities for children to develop self-regulation with respect to food in the school setting.

Finally, the use of a structured approach in the morning and a self-regulation approach in the afternoon was observed in two classrooms (on one observation day in the north-east

classroom at the Raspberry School and on all three observation days in the west classroom at the Blueberry School). On all four observation days with this model, students were observed enjoying the opportunity for a shared meal time with their peers during the structured morning snack time. In the afternoons, the children employed a self-regulation approach to snack time. It was noted that at the beginning, middle and multiple times near the end of the snack station, teaching staff reminded the class that it was available for anyone who was hungry. While only a portion of students chose to attend the snack station, no complaints of hunger were observed at the end of the day in these two classrooms.

The use of a self-regulation approach to both morning and afternoon snack was challenging for some children in this study and resulted in the loss of an opportunity for a shared mealtime, while the exclusive use of a structured approach was effective but resulted in the loss of opportunity to develop self-regulation. Within the models observed in this study, the structured approach in morning and a self-regulation approach in the afternoon was the most effective and provided the children with the opportunity to both enjoy a shared meal in the morning and to develop self-regulation in the afternoon.

Self-reported Wellbeing.

Whereas child participants' self-reported wellbeing in the child care eating environment was overwhelmingly positive, participants reported a wider array of feelings in the kindergarten eating environment. In fact, more than half of the 11 participants who demonstrated a clear ability to identify a range of feelings reported negative feelings during school lunch, while some of the participants who reported positive feelings during lunch were happy because they were looking forward to going outside *after* lunch and another reported feeling happy to be playing a

game moving the chairs her peers were sitting on to eat lunch (preventing many children from actually eating). Only three participants reported positive feelings about lunch in the kindergarten setting, though one of these participants (as outlined in the section on choice in the Perceptions of the Kindergarten Eating Environment findings section) also described feeling sad about the nutritious food her mother packed in her lunch. Overall, participants reported a notable decline in wellbeing from the eating environment in the childcare setting to the eating environment in the school setting.

Perceptions of the Kindergarten Eating Environment

Among adults contributing to the study, the common thread was concern regarding the kindergarten eating environment. While in the parent survey, most reported that they believed that their children either ate the same in the child care setting (six of 13 respondents) or that they ate a wider variety of foods at the child care centre than they did at home (six of 13 respondents)⁵⁶, expectations for the kindergarten eating environment were quite different. Parents expressed concerns about whether or not their children would eat in the school environment, citing children becoming distracted, insufficient supervision and the inability to open lunch containers. Staff in the school setting was also concerned about the lunchtime environment. Kindergarten teachers went so far as to suggest that junior kindergarten children who start the school year when they are three or four years old are simply too young for full day schooling and that kindergarten children should simply go home for lunch, a sentiment echoed by teachers throughout the study. Early childhood educators (ECEs) raised concerns about the inability to implement their training due to inadequate ratios during the lunch time, child safety and the importance of continuity of care. Similarly, some of the untrained lunchroom supervisors

⁵⁶ The other parent simply noted, “at home I know what she eats.”

expressed safety concerns and a desire for both training and better staff-to-student ratios. Notably, it was only the staff in the rooms where safety risks were observed who did not express any concerns whatsoever. With few exceptions, adults in the study perceived the kindergarten eating environment as problematic.

Child participants expressed some concern about the kindergarten eating environment and pleasure in some instances concerning unfortunate dietary trends, like increased access to convenience foods and treats. In response to open ended questions about their lunchtime experience, participants identified three central themes: time, socialization and choice. Six of the nine female participants independently named not having enough time to eat, all of the participants were observed facing the same issue and (among those who responded to the question) confirmed that it was a problem. This challenge had significant impacts on the eating environment as lunch supervisors separated talking children and focused on trying to get the children to eat efficiently, while parents sent higher proportions of convenience foods over the course of the year in the hopes that their children would eat. The children, who had enjoyed supported mealtime conversation in the childcare setting, experienced eating without talking as a loss. On the other hand, while children reported positive feelings about being able to choose some of the items in their lunches, many children identified that they were happy to receive treats, snacks and other nutrient-poor, calorie-rich items in their packed lunches. This is consistent with literature that suggests that students value to the social rather than the nutritional aspects of school lunch⁵⁷ (Daniel & Gustafsson, 2010). In the absence of the mealtime supports

⁵⁷ This article, however, positions children's preference for socializing at odds with an instrumental and joyless focus on health and nutrition (Daniel & Gustafsson, 2010). This needn't be the case. In fact, a UK study involving 80,000 randomly selected individuals found that a "happiness and mental health rise in an approximately dose-response way with the number of daily portions of fruit and vegetables" with well-being peaking at approximately 7 servings per day (for adults) (Blanchflower, Oswald, & Stewart-Brown, 2013, p. 785) and several studies confirm that school food programs help to improve fruit and vegetable consumption and to even income disparities in this

available in the childcare setting, children experienced a deterioration of their lunch time meal environment.

Study findings suggest that, when compared to the childcare eating environment, the kindergarten eating environment is subpar. Consistent with the literature on positive mealtime environments for children three to six years old (Fletcher et al., 2005; Mita et al., 2015), results in the childcare centre setting suggest that children value and benefit from the opportunity to have this shared meal along with their caregivers in a family-style meal setting, as is the case in the Blueberry Childcare centre. By contrast, practice in the kindergarten eating environments observed in this study would be classified as inadequate practice in the BMER inventory (Fletcher et al., 2005). In “Our Best Future”, Pascal (2009) clearly outlined the expectation that “the schedules of the [two classroom] ECEs should overlap during the children’s lunch period to allow lunch breaks for the staff while *maintaining a learning environment for the children.*” (emphasis added, p. 61) The failure to meet the standard outlined in the FDK plan of action impacts child wellbeing to the extent that even four-year-old children were able to independently identify some of the key problems with the school lunch environment.

The Central Role of the ECE

The study was initially designed to examine the well-being impacts of the kindergarten school eating environment and to identify best practices for age-specific regulation in this area. The childcare setting offered a useful basis for comparison, because children of this age have been in full-day care in childcare centres for decades, often in school buildings, and the

regard (Folkvord, Anastasiadou, & Anschütz, 2017; Ishdorj et al., 2012; Krølner et al., 2009; Longacre et al., 2014; Yamaguchi, Kondo, & Hashimoto, 2018). Furthermore, this study suggests that the opposite may be true, given an environment structured with positive adult support.

regulation of this care is mandated through the Ministry of Education. Among the three sites, Blueberry Childcare Centre offered the eating environment with the highest approval rating among child participants and the most positive impact on both mealtime socialization and food choices, based on study observations and parent reports. The structure of the school lunch hour, with expectations that children will eat and play outdoors in one hour under the supervision of a single, often untrained, adult, raised questions of basic safety and whether or not the children were able to eat. Excluding rooms where staff donated their time out of concern for the children, the best kindergarten lunchroom in the study was the one at Raspberry School staffed by a single ECE. This room, however, can be described as effective but not optimal, because while the children were safe and could eat, the lunchroom operated with an institutional efficiency and child participants expressed negative feelings about this.

Throughout the first and third phases of the study, participants were observed for a full day. Classroom observations demonstrated that the most effective classrooms were those staffed by two adults, a teacher and an ECE, who had the opportunity to cultivate a collaborative approach to running the classroom. While in these cases the collaborative approach was supported by a strong principal, this needs to be supported through policy, as was intended by the architects of FDK (Pascal, 2009). Both key informants and the literature suggest that structuring planning time for both members of the teaching team promotes co-teaching (K. McCuaig, personal communication, May 6, 2015; Underwood et al., 2016).

Furthermore, study findings suggest that best practices in eating environments were only found in the childcare setting, that the safest school lunchrooms are staffed by trained ECEs, and that some lunchrooms staffed by untrained adults can only be described as dangerous. In fact, teaching staff, ECEs, and untrained lunchroom staff all expressed concern for the welfare and

wellbeing of children during the lunch hour under the current conditions. Observations show that many staff members are sufficiently concerned about lunchroom staffing that they volunteer their time to support their students during that time, in some cases even in the presence of an ECE-trained lunchroom supervisor. The rooms in which ECE lunchtime supervision was supplemented with classroom ECE and/or teacher supervision represented the closest example of a best practice in the school setting and most closely align with the original design for FDK. While it is clear that the students in these classes benefited from this volunteer work, the risks evident in some of the classrooms demonstrate that a policy response would more likely ensure better supervision and care during the lunch hour for all students.

Conclusion

This study has sought to evaluate the kindergarten eating environment based on child participants' first-hand experiences of the school eating environment relative to the childcare eating environment. In so doing, this dissertation has addressed both the question of whether wellbeing impacts can be used to evaluate regulatory policy and of whether very young children can meaningfully participate in such research. Study findings suggest that the relative policy vacuum with respect to school eating environments has had negative impacts on the child participants and that these young children themselves are able to identify the immediate impacts (including insufficient time and loss of social time) though they were not able to identify more long-term impacts (including the effects of poorer quality packed lunches and the loss of mealtime socialization).

Specifically, this dissertation has explored two central empirical questions. First, what are the differences between children's experiences of eating in full day childcare and in full day kindergarten? And second, how do school eating environments impact the wellbeing of children in the FDK program? As was outlined in the literature review, the robust regulatory framework for eating in childcare centres contrasts significantly with that of the school eating environments. Within the childcare setting, the Day Nurseries Act (DNA), in place at the time of the study, and its successor, the Child Care and Early Years Act (CCEYA), regulations, including age-specific staffing ratios, maximum absolute number of children in a room, minimum amount of space per child, frequency of mealtimes and nutrition requirements (see Appendix A), are clearly outlined. By contrast, because the lunch hour falls outside of instructional time in the school setting and both the School Food and Beverage Policy (PPM 150, see Appendix A) and the Healthy Food for Healthy Schools Act (Bill 8, see Appendix A) regulate foods sold on the school premises but

not the eating environment itself, there are no meaningful regulations guiding practice in school eating environments. In fact, beyond not regulating eating environments, public schools expressly recommend that students “go home for lunch” so that they can “benefit from eating in a quiet, calm setting” to “prepare them for afternoon learning.” (Blueberry School Website) This is problematic because, as noted above (p. 23), the expectation that parents and caregivers are able to take children home for lunch is conspicuously out of step with contemporary reality and, at the same time, the recommendation suggests an awareness that in the school setting children do not have access to eating in the calm, quiet setting they require to prepare them for afternoon learning.

Throughout the study child participants clearly conveyed that they like to eat and that they enjoy the opportunity to eat in a social setting with their peers. In the childcare centre setting, participants’ self-reported wellbeing at mealtimes was overwhelmingly positive. Consistent with the literature on positive mealtime environments for children ages three to six years old (Fletcher et al., 2005; Mita et al., 2015), results in the childcare centre setting suggest that children valued and benefited from the opportunity to have this shared meal along with their caregivers in a family-style meal setting, as is the case in the Blueberry Childcare centre. Additionally, observations and parent surveys demonstrated that the majority of participants ate a wider variety of healthy foods in the childcare setting than they did at home or in other settings.

Relative to the childcare centre eating environments, school eating environments are fiscally constrained. Once children entered the FDK program, their self-reported responses began to reflect negative experiences and researcher observations included the emergence of physical risks during the lunch time. Specifically, child participants identified insufficient time to eat and

being discouraged or prevented from socializing with peers as a source of their bad feelings, ECEs pointed to lost opportunities for socialization, staff pointed to safety concerns and parents worried about how little children ate in the kindergarten setting. In some cases, parents sent increasing proportions of convenience foods in an attempt to make it easier for their children to eat. While the children had positive feelings about these items in their lunches, previous research demonstrates that developing poor dietary habits early in life has long term health consequences and recent qualitative research exploring the snacking habits of Canadian pre-school children found that nearly all children consumed low nutrient snacks, comprising one-third of their daily energy intake (Hutchinson et al., 2018). The majority of the children in this study ate a wider variety of nutritious foods in the child care setting than they did at home. On the other hand, in the absence of effective mealtime modeling and *in-situ* nutrition education, the opportunity for choice in the school setting led to the children eating a greater portion of nutrient-poor, calorie-dense snacks despite the fact that *Our Best Future* explicitly advocated providing “healthy snacks” (Pascal, 2009, p. 19) as a central component of the FDK program. This study suggests that in a setting with adequate support and a range of healthy options, positive peer modeling and choice may lead children to eat increasingly healthful diet.

Study findings suggest that 20 minutes is not enough time for 3 and 4-year-old children to consume a meal. This was observed among all participants (even the participant who was once seen to have completed his lunch in the allotted time, was later observed to be unable to complete it in the allotted time on other days), this was the finding most consistently independently raised by participants, and this finding was supported by all concerned actors. Simply put, study observations suggest that many junior kindergarten aged children require more than 20 minutes to eat their lunches.

The most effective school lunchrooms in the study were those supervised by a trained ECE accompanied by classroom staff (either teacher, ECE or both) donating their time. While this is the model that most closely aligns with what was outlined in the original architecture for FDK in Ontario, donated time does not constitute continuity of care. Repeated claims by both teaching and lunchtime staff that children are not safe during the school lunch time were supported by study observations. Indeed, in some classroom settings the research questions devolved from those outlined above to the minimal questions, “are the children safe” and “can the children eat?” In some cases, the answers to both of these questions was, “no.”

With respect to the theoretical questions, whether or not wellbeing can be used to evaluate policy governing eating environments in care settings and whether or not young children can meaningfully participate in such assessments, the answer to both of these questions is yes. As noted in Part 1, wellbeing assessments are increasingly being applied in various elements of policy evaluation (Forgeard et al., 2011), researchers are beginning to recognize that children can attest to their own wellbeing (Ben-Arieh, 2005, 2008, 2014; Crivello et al., 2009; Dinisman & Ben-Arieh, 2016; Jiang, Kosher, Ben-Arieh, & Huebner, 2014; Kosher, Jiang, Ben-Arieh, & Huebner, 2014; Qvortrup, 2014; Sandin, 2014), and young children are being invited to participate in research that impacts them (Clark, 2005; Clark & Moss, 2001; Ontario Ministry of Education, 2012; Wien, 2013; Carol Anne Wien et al., 2011). This study confirms the potential for very young children to meaningfully participate in a wellbeing assessment designed to evaluate policy governing eating environments in care settings.

The model for wellbeing employed in this study included three domains—material security, relationship and engagement. That a level of material security is a prerequisite for wellbeing is well documented (Sen, 1999). Within the context of this study, none of the participants (for whom there is data⁵⁸) faced extreme poverty in the home setting and each of the three participating schools used the classroom setting as the kindergarten lunch room, reducing the potential for comparative analysis of the physical eating environments in the school settings in the study. The comparison of the eating environment in the childcare setting with that of the kindergarten setting, however, was stark. As has been noted, in the childcare setting the physical set up of the lunch table, the absolute number of children and the amount of time children were allowed to eat all contributed to an eating environment where the child participants had overwhelmingly positive experiences. Furthermore, key informant reports from the motivating case at the Red Mulberry School, where over 100 three-to-five-year-old's ate lunch in one room under the supervision of five untrained adults, indicate that it may be possible to identify a continuum of practices likely to lead to a range of wellbeing impacts deriving from the material conditions of the school or group eating environments.

Likewise, the importance of positive relationships for wellbeing is supported by a robust research history (Guardia et al., 2008; Reis, 2011; Reis & Gable, 2003). In the context of the study, as has been noted, it emerged that the ECE and trained staff with whom the children had an ongoing relationship throughout the school day were the key factor in the more effective kindergarten lunch rooms. Additionally, child participants were keenly attuned to their opportunities for socializing in the lunch setting, talking with friends something they enjoyed about lunch time and, in contrast, being prevented from talking with friends something that made

⁵⁸ Some families did not complete the parent survey and some of the families did not complete the socio-economic status section of the parent survey.

them sad about the kindergarten eating environment. Indeed, anthropologists point to the importance of commensality and conviviality within social groups (Ochs & Shoet, 2006; Phull, Wills, & Dickinson, 2015) noting the central role that food plays in constructing social relationships (Julier, 2013).

While the importance of engagement for eudemonic wellbeing has also been outlined, most notably by Csikszentmihalyi (1990) and the cognitive and educational benefits of school food programs are well documented (J. L. Brown et al., 2008), the engagement domain proved difficult to assess in the context of this study. Indeed, though notes were taken on apparent attentiveness, distraction, focus while undertaking self-directed and appointed tasks and participants' awareness of their surroundings, recent and current activities and feelings, there was insufficient data to form meaningful connections in this study. At the same time, a related element, the element of choice, emerged both as significant for child participants and as an area with important implications. As has been mentioned, in Phase 3 participants talked about enjoying their packed lunches because their parents would let them choose some of the things in them. In these cases, participants consistently mentioned "treats" and other nutrient-poor, calorie dense snacks. By contrast, while only six of the 13 respondents described believing that their children ate a wider variety of nutritious foods in the childcare setting, cross referencing observations, participant interviews and parent responses regarding their children's least preferred foods revealed that, when presented with a range of healthy options in the childcare setting, the majority of participants ate a wider variety of nutritious foods there than at home. This suggests that the way that children engage in a group meal setting could improve or diminish healthy eating habits. Research has demonstrated that younger children are more impacted by peer modeling than older children (Birch, 1980) with the implication that the

structure of group eating environments for young children may have particularly significant impacts.

Indeed, while there is a body of literature dedicated to the study of school food environments both in Canada (Browning et al., 2013; Vine & Elliott, 2014a, 2014b; Vine et al., 2014; Winson et al., 2012) and abroad (Briefel et al., 2009; Glanz et al., 2005; Missbach et al., 2017; Terry-McElrath et al., 2014) to date this literature has remained primarily focused on the retail environment. At the same time, the literature addressing eating environments has remained focused on either early years centres (Fletcher et al., 2005; Mita et al., 2015) or the home environment (R. R. Brown & Ogden, 2004; Kok, 2015). This study has demonstrated that the school eating environment impacts the wellbeing of students and, consequently, merits further study.

Recommendations

The findings of the study are consistent and, if confirmed by larger studies, would support the following policy recommendations:

- 1) Smaller group settings are optimal for kindergarten lunch rooms. Child participants had overwhelmingly positive experiences in the smaller group settings provided in the childcare centre and key informants advocated smaller group settings. The CCEYA offers effective recommendations for maximum numbers of three-to-five-year-olds in a given room.
- 2) Staff training and staff-to-student ratios are essential for effective lunch consumption. Level of staff training (i.e. whether or not the supervising staff was a trained ECE) and staff to student ratios (i.e. classrooms in which the classroom ECE or ECE and teacher gave up their lunch break to support the students at lunch) proved to be the only consistent condition for a relatively effective kindergarten lunchroom. The CCEYA offers effective regulations regarding staff training and staff-to-child ratios. Barring that standard, study findings support a view that there be at least two adults per kindergarten lunch room, at least one of whom is a trained ECE.
- 3) Young children need more than 20 minutes to eat lunch. Not having enough time to eat was the most reported problem among child participants, was confirmed through observations and reiterated among key informants. Contextual findings suggest that gross motor time is equally important. Time to eat needs to be disaggregated from mid-day

gross motor time and children should be allowed to eat until they are sated, without compromising their gross motor time.

- 4) Mealtime socialization is important. Child participants experienced restrictions on socializing as a loss (as compared to the childcare setting) and observations demonstrated a lost opportunity for mealtime socialization. If recommendations 1-3 are implemented, children could have enough time and guidance in a calm setting to benefit from the social opportunity.
- 5) Children value choice in their lunches. In a setting where children are choosing between a range of healthy options, as in the childcare setting, this was observed to have a positive effect on their relationship with food—children enjoyed their meals and many participants ate a wider variety of nutritious foods than they did at home. By contrast, in kindergarten lunch room, the effect of choice seemed to result in increasing selection of packaged, nutrient poor, calorie dense snacks. A universal hot lunch program is one way to offer structured healthy choices for kindergarten children.
- 6) A structured morning snack time offers an opportunity for both nutrition education and modeling. A self-regulation approach, if employed, works better in the afternoon. If the self-regulation approach is employed during the morning centre time, it is important that the time be separated from the scheduled lunch time.
- 7) Including lunch time as part of instructional time would facilitate the use of modeling techniques for nutrition education, as occurs in the childcare setting. Nutrition education is an important component of health education. The pedagogical meal would provide the opportunity to foster healthy eating habits.

Both regulations for Ontario childcare centres and policy and program requirements for Ontario schools are implemented through the Ontario Ministry of Education. While many of the

issues pertaining to student nutrition programs and school food provisioning face the jurisdictional quagmire of our federalist system, in this particular case we have an example of a comparatively effective regulatory framework within the same ministry of the provincial government suggesting that, in the presence of the necessary research and political will, improvements in the kindergarten eating environment to support child wellbeing should be attainable.

Limitations

Sample Size

This was a small qualitative study with a total of 21 participants, 17 of whom participated throughout the entire study. While findings were corroborated via key informant interviews with experiences in other sites, findings may not be generalizable.

Demographics

Respondents to the parent survey suggest that the sample was disproportionately wealthy, underrepresented families in all other income ranges, overrepresented children of mixed race and Latin American children and underrepresented Asian children suggesting that the sample was not representative. At the same time, the families of 13 participants completed the survey and only 11 families responded to questions relating to household income, thus survey responses may not accurately represent the demographic distribution of participants.

Non-participants

ERRC restrictions prevented recruitment of participants within TDSB settings, though throughout each phase of the study, during both interviews and observations non-participants consistently and repeatedly requested to participate in the study. Recruitment of additional participants would have increased the sample size and might have offered a more representative sample.

Researcher Interference

There are two clear ways that researcher presence interfered with the accuracy of the data. First, there were two occasions when staff required my assistance and as an additional adult I could not ethically refuse. On KR's observation day, she was slow putting on her winter gear

for outdoor play. The staff took the class outside before she was fully dressed. Though the children were not meant to be left in my care, I assisted her with her boots, winter jacket and mittens in order to bring her outside with the rest of her classmates and attending staff. On JaH at the Huckleberry School's observation day the classroom teacher was called out for a personal emergency. Over the course of the final 2 hours of the school day 3 adults took turns supervising the students. Because this classroom had no ECE, I was the only adult in the room familiar with the classroom routines and the students. Given that this was also the classroom with a high frequency of violent incidents, I could not ethically refuse to help the supervising staff.

Second, some of the child participants enjoyed being part of the study so much that it impacted results. For example, ZR wanted to stay at my side throughout her P3 observation day and was also territorial when peers approach me; LR clearly enjoyed the attention of the interviews and reported going from super sad/WB 1 to super happy/WB 5 when she had the opportunity to interact with the researcher; and JoH at the Huckleberry Site reported feeling angry/WB1 at the beginning of his third P3 interview but is then excited/WB5 because it is his turn on the microphone. While the extent to which children enjoyed participation may have impacted the data, it also reflects how much children desire to be heard. Both participants and non-participants continually requested to be heard. For the most part, the children were eager to answer questions, to talk about their likes and, in some cases, to reflect on their emotions. As has been outlined, children, especially young children, are one of the vulnerable groups that generally remain unheard. It is true, just being heard may have skewed some of the results more positively, but that is because the children so enjoyed the opportunity to feel that their perspective is valued.

Directions for Future Research

The findings suggest that the kindergarten eating environment negatively impacts child wellbeing and that policies in line with those present in the CCEYA, proposed in *Our Best Future* (Pascal, 2009) or outlined in *Building Positive Mealtime Environments* (Fletcher et al., 2005) would improve children's mealtime experiences. Issues such as insufficient time to eat, lack of staff training, insufficient staff to student ratios and loss of opportunities for mealtime socialization and modeling emerged as core issues in the current model. Further research would help to better understand school eating environments, their impacts on child wellbeing, areas to improve and best practices.

This was a small study with a total of 21 participants that looked exclusively at the kindergarten eating environment in one school board. Given the critical nature of some of the findings and policy recommendations it would be useful to conduct a similar study on a larger scale with a more representative sample. Furthermore, this research pointed to related concerns with the eating environments available to children in early elementary school (grades 1-3). Optimally, a subsequent study would be of a larger scale, longitudinal and would work with a cohort of students at intervals throughout kindergarten and early elementary school.

Study findings indicated that many participants ate a wider variety of healthy foods in the childcare setting and, by contrast, exhibited the opposite tendencies in the school eating environment. Similarly, forthcoming research from the University of Saskatchewan (expected Fall 2018) demonstrates that the quality of packed lunches is lower than the quality of food in lunch programs. Further study is necessary to delineate the mechanisms of positive mealtime

modeling (both among staff and peers) in the childcare environment from the factors which led to increased requests for nutrient-poor, calorie-dense foods in the school setting.

While data was collected in an effort to report on the engagement domain of the wellbeing model, notes on when child participants were engrossed or attentive as compared to disinterested or inattentive were insufficient to produce meaningful findings. It may be necessary to consider cognitive assessments or another measure to evaluate cognitive engagement. These options were not available in this study, conducted by a lone graduate student.

Finally, the contextual findings suggest numerous areas for future research. These include: an examination of the interplay between adequate gross motor time, suitable eating environments and sufficient rest; girls who never reported a negative emotion and girls who were not called on to speak in class; boys who cite being physically hurt as the only reason for negative emotions and boys in apparent distress in the classroom; and appropriate use of technology in the classroom.

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Appendices

Appendix A: Regulations and Policies

Day Nurseries Act.

Day Nurseries Act, R.R.O. 1990, REGULATION 262, GENERAL (Repealed August 31, 2015)
<https://www.ontario.ca/laws/regulation/900262> (Day Nurseries Act R.S.O. 1990, c.D.2, 1990)

Nutrition.

39. Every operator shall ensure that,

- (a) each infant under one year of age that is in attendance in a day nursery operated by the operator or in a location where private-home day care is provided by the operator is fed in accordance with written instructions from a parent of the child;
- (b) where food or drink or both is supplied by a parent of a child in attendance in a day nursery operated by the operator or location where private-home day care is provided by the operator, the container for the food or drink is labelled with the child's name; and
- (c) all food or drink is stored, prepared and served so as to retain maximum nutritive value and prevent contamination. R.R.O. 1990, Reg. 262, s. 39.

40. (1) Every operator shall ensure that each child one year of age or over that is in attendance in a day nursery operated by the operator or in a location where private-home day care is provided by the operator is provided with,

- (a) subject to section 43, where the child is in attendance at meal time, a meal consisting of at least one serving from milk and milk products, one serving from meat and alternates, one serving from bread and cereals, and two servings from fruits and vegetables within the range set out in Column 2 or 3, as the case may be, of Schedule 1, for each food group set out opposite thereto in Column 1 of Schedule 1, except where otherwise approved by a Director in the case of a child who is 44 months of age or over as of August 31 of the year; and
- (b) nutritious between-meal snacks consisting of foods that will promote good dental health at times that will not interfere with a child's appetite for meal time. R.R.O. 1990, Reg. 262, s. 40 (1); O. Reg. 505/06, s. 9.

(2) Where a child referred to in subsection (1) is in attendance for six hours or more, the operator shall ensure that the total food offered to the child over the period of attendance for each food group set out in Column 1 of Schedule 2 is within the range set out opposite thereto in Column 2 of Schedule 2. R.R.O. 1990, Reg. 262, s. 40 (2).

41. (1) Every operator of a day nursery shall post planned menus for the current and following week in a conspicuous place in each day nursery operated by the operator with any substitutions noted on the posted menus. R.R.O. 1990, Reg. 262, s. 41 (1).

(2) A menu referred to in subsection (1) shall be retained by the operator for thirty days after the last day for which it is applicable. R.R.O. 1990, Reg. 262, s. 41 (2).

(3) Every operator of a private-home day care agency shall ensure that each person in charge of the children in each location where private-home day care is provided by the operator plans menus in consultation with the child's parents, and a private-home day care visitor. R.R.O. 1990, Reg. 262, s. 41 (3).

42. Every operator of a day nursery shall ensure that a list is posted in each cooking and serving area of each day nursery operated by the operator that sets out the names of the children enrolled in the day nursery that have food allergies and their respective allergies. R.R.O. 1990, Reg. 262, s. 42.

43. Every operator shall ensure that where special dietary and feeding arrangements have been made with the operator with respect to a child enrolled in a day nursery operated by the operator or in a location where private-home day care is provided by the operator that the arrangements are carried out in accordance with the written instructions of a parent of the child. R.R.O. 1990, Reg. 262, s. 43.

Staff numbers and group size.

55. (1) Every operator of a day nursery shall ensure that the children enrolled in each day nursery operated by the operator are placed in groups according to age as set out in Schedule 3 or 4, as the case may be, except where a Director approves otherwise in accordance with subsection (2). R.R.O. 1990, Reg. 262, s. 55 (1).

(2) A Director may approve the placement of children in one age group with children in another age group if,

(a) the ratio of employees to children and the group size required for the younger age group are used for mixed age groups if more than 20 per cent of the children are from the younger age group; and

(b) younger or older children are placed in not more than one group for each category as set out in Schedule 3 for each day nursery operated by the operator. O. Reg. 50/91, s. 2.

(3) The number of employees required for the care and guidance of the children enrolled in a day nursery when on the premises or during activities off the premises shall be determined by the operator of the day nursery in accordance with the ratios set out in Column 2 of Schedule 3 or 4, unless otherwise approved by a Director. R.R.O. 1990, Reg. 262, s. 55 (3).

(4) Every operator of an integrated day nursery or private-home day care agency shall employ one resource teacher to plan and direct the individual and small group training for every four handicapped children who are enrolled in the day nursery operated by the operator or location where private-home day care is provided by the operator and who are funded under the Act or under the *Developmental Services Act*, unless otherwise approved by a Director. R.R.O. 1990, Reg. 262, s. 55 (4); O. Reg. 435/01, s. 5.

(5) A resource teacher shall not be included when calculating the number of employees under subsection (3). R.R.O. 1990, Reg. 262, s. 55 (5).

(6) Despite subsection (1), except where the children enrolled are under eighteen months of age, during the periods of arrival and departure of children and during the rest period the ratio of employees to children may be reduced to less than that set out in Schedule 3 or 4, as the case may be, if the observed ratio is not less than two-thirds of the required ratio. R.R.O. 1990, Reg. 262, s. 55 (6).

(7) Where,

- (a) fewer than five full-time employees are required to meet the ratios as set out in Schedule 3 or 4, the supervisor may be counted as a full-time employee;
- (b) five or six full-time employees are required to meet the ratios as set out in Schedule 3 or 4, a full-time supervisor may be counted as a full-time employee for up to half the time a full-time employee is required to be on staff; and
- (c) seven or more full-time employees are required to meet the ratios as set out in Schedule 3 or 4, the supervisor shall not be counted as an employee. R.R.O. 1990, Reg. 262, s. 55 (7).

(8) Every operator of a day nursery shall ensure that where there are in attendance at a day nursery operated by the operator,

- (a) fewer than six children eighteen months of age or over, there is at least one adult in attendance;
- (b) six or more children eighteen months of age or over, there are at least two adults in attendance;
- (c) fewer than four children under eighteen months of age, there is at least one adult in attendance; and
- (d) four or more children under eighteen months of age, there are at least two adults in attendance. R.R.O. 1990, Reg. 262, s. 55 (8).

56. (1) Every operator of a private-home day care agency shall ensure that the number of children, including the children of the person in charge, who are under six years of age in attendance at each location where private-home day care is provided by the operator does not exceed five and that the following number of children in each of the following classifications is not exceeded at any one time:

- 1. Two handicapped children.
- 2. Two children, who are under two years of age.
- 3. Three children, who are under three years of age.
- 4. One handicapped child and one child who is under two years of age.
- 5. One handicapped child and two children who are over two years of age but under three years of age. R.R.O. 1990, Reg. 262, s. 56 (1).

(2) Every operator of a private-home day care agency shall establish a maximum capacity in accordance with subsection (1) for each location where private-home day care is provided by the operator and this capacity shall be set out in the agreement between the operator and the person in charge of the children in that location. R.R.O. 1990, Reg. 262, s. 56 (2).

57. Every operator shall ensure that every child who is in attendance in a day nursery operated by the operator or in a location where private-home day care is provided by the operator is supervised by an adult at all times. R.R.O. 1990, Reg. 262, s. 57.

Staff qualifications.

58. A supervisor shall be a person who,

(a) holds,

(i) a diploma in early childhood education from an Ontario College of Applied Arts and Technology, or

(ii) an academic qualification that a Director considers equivalent to a diploma referred to in subclause (i);

(b) has at least two years of experience working in a day nursery with children who are at the same age and developmental levels as the children in the day nursery where the supervisor is to be employed; and

(c) is approved by a Director,

or is in the opinion of a Director capable of planning and directing the program of a day nursery, being in charge of children and overseeing staff. R.R.O. 1990, Reg. 262, s. 58.

59. (1) Every operator of a day nursery, except a day nursery for handicapped children, shall employ in each day nursery operated by the operator at least one person for each group of children set out in Column 3 of Schedule 3 who,

(a) holds,

(i) a diploma in early childhood education from an Ontario College of Applied Arts and Technology, or

(ii) an academic qualification that a Director considers equivalent to a diploma referred to in subclause (i); or

(b) is otherwise approved by a Director. R.R.O. 1990, Reg. 262, s. 59 (1).

(2) Every operator of a day nursery for handicapped children shall employ in each such day nursery operated by the operator at least one person who holds the qualifications set out in subsection (1) for each group of children set out in Column 3 of Schedule 4. R.R.O. 1990, Reg. 262, s. 59 (2).

59.1 In respect of operators who held a licence before November 3, 2006, for the purpose of the following provisions, Schedule 3 as it read immediately before November 3, 2006 continues to apply to those operators until the licence is renewed under subsection 75 (7):

1. Subsection 55 (1).
2. Clause 55 (2) (b).
3. Subsection 55 (3).
4. Subsection 55 (6).
5. Subsection 55 (7).
6. Subsection 59 (1). O. Reg. 505/06, s. 12.

60. A resource teacher shall be a person who,

(a) holds,

(i) a diploma in early childhood education from an Ontario College of Applied Arts and Technology, or

(ii) an academic qualification that a Director considers equivalent to a diploma referred to in subclause (i);

(b) has completed a post-secondary program of studies approved by a Director that is both theoretical and practical and that relates to the needs of handicapped children; and

(c) if working with multi-handicapped children, has a current standard Red Cross or standard St. John's Ambulance certificate in first-aid,

or is in the opinion of a Director capable of planning and directing individual and small group training for handicapped children. R.R.O. 1990, Reg. 262, s. 60.

61. A private-home day care visitor shall be a person who,

(a) has completed a post-secondary program of studies, approved by a Director, in child development and family studies;

(b) has at least two years of experience working with children who are at the same age and developmental levels as the children enrolled with the private-home day care agency where the person is to be employed; and

(c) is approved by a Director,

or is in the opinion of a Director capable of providing support and supervision in a location where private-home day care is being provided. R.R.O. 1990, Reg. 262, s. 61.

Schedule 1.

Item	Food group	Range of Serving Size Children under six years of age but more than one year old	Rang of Serving Size Children six years of age and over
1	Milk and milk products	125 to 175 millilitres	175 to 250 millilitres
2	Meat and alternates	30 to 60 grams	60 to 90 grams
3	Bread and cereals	½ to 1 slice or 50 to 125 millilitres	1 slice or 125 to 175 millilitres

4	Fruits and vegetables	¼ to 1 whole fruit or 80 to 125 millilitres	1 whole fruit or 125 millilitres
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Schedule 2.

Item	Food group	Amounts offered to each Child in attendance for six hours or more
1	Milk and milk products	250 to 375 millilitres
2	Meat and alternates	60 to 90 grams
3	Bread and cereals	½ to 2 ½ slices or 175 to 450 millilitres
4	Fruits and vegetables	2 to 2 ½ whole fruits or 250 to 300 millilitres

Schedule 3.

Item	Age of Children in Group	Ratio of Employees to Children	Maximum Number of Children in Group
1	Under 18 months of age	3 to 10	10
2	18 months of age and over up to and including 30 months of age	1 to 5	15
3	More than 30 months of age and up to and including 5 years of age as of August 31 of the year	1 to 8	16
4	44 months of age or over and up to and including 67 months of age as of August 31 of the year	1 to 10	20
5	55 months of age or over and up to and including 67 months of age as of August 31 of the year	1 to 12	24
6	68 months of age or over as of August 31 of the year and up to and including 12 years of age	1 to 15	30

Policy/Program Memorandum No. 150.

(Ontario Ministry of Education, 2010a)

Date of Issue: October 4, 2010

Effective: Until revoked or modified

Subject: SCHOOL FOOD AND BEVERAGE POLICY

Application: Directors of Education

Supervisory Officers and Secretary-Treasurers of School Authorities

Principals of Elementary Schools

Principals of Secondary Schools

Principals of Provincial and Demonstration Schools

Reference: This memorandum replaces Policy/Program Memorandum No. 150, January 15, 2010.

The Ontario government is committed to making schools healthier places for students in order to establish the conditions needed to realize the potential of all students. A healthy school environment enhances student learning and success, and enhances students' social and emotional well-being. Schools have an important role to play in helping students lead healthier lives, including teaching students the skills to make healthy choices and reinforcing those lessons through school practices.

The purpose of this memorandum is to set out nutrition standards for food and beverages sold in publicly funded elementary and secondary schools in Ontario.

APPLICATION

School boards¹ are required to ensure that all food and beverages sold on school premises for school purposes meet the requirements of this memorandum, including the nutrition standards set out in the Appendix to this memorandum, by September 1, 2011. The nutrition standards apply to all food and beverages sold in all venues (e.g., cafeterias, vending machines, tuck shops), through all programs (e.g., catered lunch programs), and at all events (e.g., bake sales, sports events).

The standards do not apply to food and beverages that are:

- offered in schools to students at no cost;
- brought from home or purchased off school premises and are not for resale in schools;
- available for purchase during field trips off school premises;
- sold in schools for non-school purposes (e.g., sold by an outside organization that is using the gymnasium after school hours for a non-school-related event);
- sold for fundraising activities that occur off school premises;
- sold in staff rooms.

LEGISLATIVE AUTHORITY

Paragraphs 29.3 and 29.4 of subsection 8(1) of the Education Act provide the Minister of Education with the authority to establish a policy with respect to nutrition standards for food and beverages and for any ingredient contained in food and beverages provided on school premises or in connection with a school-related activity, and to require school boards to comply with the policy.

RATIONALE FOR A SCHOOL FOOD AND BEVERAGE POLICY

The school food and beverage policy contributes to improved education and health outcomes for all students. Research shows that "health and education success are intertwined: schools cannot achieve their primary mission of education if students are not healthy"² and that "healthy eating patterns in childhood and adolescence promote optimal childhood health, growth, and intellectual development".³

The school environment profoundly influences students' attitudes, preferences, and behaviours. Research also shows that when nutritionally inadequate food and beverages are available and promoted at school every day, even along with healthier food and beverages, it becomes increasingly difficult for students to have a healthy diet.⁴

The implementation of the school food and beverage policy in Ontario's publicly funded schools will contribute to reducing students' risk of developing serious, chronic diseases, such as heart disease, type 2 diabetes, and certain types of cancer.

The school food and beverage policy constitutes a comprehensive approach to the sale of food and beverages in schools province-wide. The implementation of this policy is another important step in creating healthier schools in Ontario.⁵ It also reinforces the knowledge, skills, and attitudes regarding healthy eating that are developed through the various subjects and disciplines in the Ontario curriculum.

NUTRITION STANDARDS

The nutrition standards embody the principles of healthy eating outlined in Canada's Food Guide, and are intended to ensure that the food and beverages sold in schools contribute to students' healthy growth and development. The nutrition standards for food and beverages are set out within the following two sections:

Nutrition Standards for Food. Food is divided into "Vegetables and Fruit", "Grain Products", "Milk and Alternatives", and "Meat and Alternatives", following Canada's Food Guide. There are also "Mixed Dishes", for products that contain more than one major ingredient (e.g., pizza, pasta, soup, salads, and sandwiches), and "Miscellaneous Items", for items that are to be used in limited amounts (e.g., condiments, sauces, dips, oils, dressings) and for confectionery, which is not permitted for sale (e.g., candy, chocolate).

Nutrition Standards for Beverages. Standards for beverages are provided separately for elementary schools and secondary schools.

The above two sections outline nutrition criteria⁶ that food and beverages must meet in order to be sold in schools. The nutrition criteria are provided in the following categories:

Sell Most (≥ 80%). Products in this category are the healthiest options and generally have higher levels of essential nutrients and lower amounts of fat, sugar, and/or sodium. They must make up *at least 80 per cent* of all food choices⁷ that are available for sale in all venues, through all programs, and at all events. The same requirement applies to beverage choices.⁸

Sell Less (≤ 20%). Products in this category may have slightly higher amounts of fat, sugar, and/or sodium than food and beverages in the "Sell Most" category. They must make up *no more than 20 per cent* of all food choices that are available for sale in all venues, through all programs, and at all events. The same requirement applies to beverage choices.

Not Permitted for Sale. Products in this category generally contain few or no essential nutrients and/or contain high amounts of fat, sugar, and/or sodium (e.g., deep-fried and other fried foods, confectionery). Food and beverages in this category may not be sold in schools.

Often a type of food or beverage (e.g., bread, meat, cheese) will fit in all three of the above categories, depending on its nutritional value. To determine whether a specific product may be sold in schools, it is necessary to read the information on the food label – particularly the Nutrition Facts table and the ingredient list – and compare this information with the nutrition criteria.

Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbecuing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.

EXEMPTION FOR SPECIAL-EVENT DAYS

The school principal may designate up to ten days (or fewer, as determined by the school board) during the school year as special-event days on which food and beverages sold in schools would be exempt from the nutrition standards outlined in this memorandum. The school principal must consult with the school council prior to designating a day as a special-event day. School principals are encouraged to consult with their students in making these decisions.

Notwithstanding this exemption, on special-event days, schools are encouraged to sell food and beverages that meet the nutrition standards set out in this memorandum.

ADDITIONAL REQUIREMENTS

The following requirements must also be met:

- School boards must comply with Ontario Regulation 200/08, "Trans Fat Standards", and any other applicable regulations made under the Education Act.
- Principals must take into consideration strategies developed under the school board's policy on anaphylaxis to reduce the risk of exposure to anaphylactic causative agents.
- Food and beverages must be prepared, served, and stored in accordance with Regulation 562, "Food Premises", as amended, made under the Health Protection and Promotion Act.
- School boards must ensure that students have access to drinking water during the school day.
- The diversity of students and staff must be taken into consideration in order to accommodate religious and/or cultural needs.

PRACTICES FOR CONSIDERATION

Boards and schools should take into consideration the following when food or beverages are sold or provided in schools:

- Offer, when available and where possible, food and beverages that are produced in Ontario.
- Be environmentally aware (e.g., reduce food waste, reuse containers, recycle food scraps).
- Avoid offering food or beverages as a reward or an incentive for good behaviour, achievement, or participation.

IMPLEMENTATION AND MONITORING

Any existing school board policies or guidelines related to food and beverages sold in schools must be in accordance with this memorandum. The ministry recognizes that there may be differences in approaches and implementation at the local level. School boards and schools are encouraged to continue to work with students, parents, school staff, community members, public health professionals, and food service providers to ensure that appropriate strategies are in place to implement this memorandum.

School boards are encouraged to consult with their board of health to implement the nutrition standards. Under Ontario Public Health Standards, 2008, boards of health have a mandate to work with school boards and schools on healthy eating in schools.

School boards are responsible for monitoring the implementation of this memorandum.

At the end of the 2010-11 school year, school boards will be required to attest that they will be in full compliance with this memorandum on September 1, 2011.

For more information on support that is available to assist with implementation, see www.ontario.ca/healthyschools.

1. In this memorandum, *school board(s)* and *board(s)* refer to district school boards and school authorities.
2. M. M. Storey, M. S. Nanney, and M. B. Schwartz, "Schools and Obesity Prevention: Creating School Environments and Policies to Promote Healthy Eating and Physical Activity", *The Milbank Quarterly*, 87(1), (2009), p. 72.
3. Centers for Disease Control and Prevention, *Guidelines for School Health Programs to Promote Lifelong Healthy Eating*, MMWR 1996;45 (No. RR-9), p. 1.
4. Dietitians of Canada, "School Food and Nutrition Recommendations for Ontario Ministry of Education Regarding Snacks and Beverages Dispensed by Vending Machines", p. 3, published with Ontario Ministry of Education, Policy/Program Memorandum No. 135, "Healthy Foods and Beverages in Elementary School Vending Machines", October 20, 2004.
5. For further information, see [Foundations for a Healthy School](#).

6. The nutrition criteria are based on scientific research, on the Canadian Food Inspection Agency's *Guide to Labelling and Advertising*, on a cross-jurisdiction scan, and on market research on available food and beverage products.

7. The following are examples of food choices: a bran muffin is one food choice and a banana muffin is another food choice; an apple is one food choice and an orange is another food choice.

8. The following are examples of beverage choices: plain milk is one beverage choice and chocolate milk is another beverage choice; orange juice is one beverage choice and apple juice is another beverage choice.

Bill 8, Healthy Food for Healthy Schools Act, 2008.

(Ontario Ministry of Education, 2008)

Wynne, Kathleen O. Minister of Education.

Bill 8 2008

An Act to amend the Education Act

Note: This Act amends the *Education Act*. For the legislative history of the Act, see the Table of Consolidated Public Statutes – Detailed Legislative History on www.e-Laws.gov.on.ca.

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Subsection 8 (1) of the *Education Act* is amended by adding the following paragraphs:

29.3 establish policies and guidelines with respect to nutritional standards for food and beverages and for any ingredient contained in food and beverages provided on school premises or in connection with a school-related activity;

29.4 require boards to comply with the policies and guidelines established under paragraph 29.3;

2. The Act is amended by adding the following Part:

Part xiii.1 NUTRITIONAL STANDARDS

Interpretation

317. In this Part,

"trans fat" has the same meaning as in the Food and Drug Regulations made under the *Food and Drugs Act* (Canada).

Trans fat prohibition

318. (1) A board shall ensure that a food or beverage offered for sale in a cafeteria of a school of the board does not contain more than the prescribed amount or percentage of trans fat.

Ingredients

(2) A board shall ensure that an ingredient used in the preparation, in a cafeteria of a school of the board, of a food or beverage offered for sale in the cafeteria does not contain more than the prescribed amount or percentage of trans fat.

Exemptions

- (3) Subsections (1) and (2) do not apply to the board,

(a) in respect of a food or beverage or an ingredient used in the preparation of a food or beverage specified in the regulations;

(b) on a special event day; or

(c) in the circumstances specified in the regulations.

Special event day

(4) For the purposes of clause (3) (b), a special event day is a day that meets the criteria set out in the regulations.

3. The Act is amended by adding the following section:

Vending machines

319. (1) A board shall ensure that a food or beverage offered for sale in a vending machine on school premises meets any nutritional standards set out in the regulations.

Exemption

(2) Subsection (1) does not apply to the board in the circumstances specified in the regulations.

4. The Act is amended by adding the following section:

Regulations

320. The Minister may make regulations,

(a) defining "dairy product" and "ruminant meat" for the purposes of this Part and the regulations;

(b) prescribing amounts and percentages for the purposes of subsections 318 (1) and (2), including prescribing different amounts and percentages for different classes of food, beverages, ingredients and types and sources of trans fat;

(c) specifying a food, beverage or ingredient for the purposes of clause 318 (3) (a), including a food, beverage or ingredient in which the trans fat originates exclusively from ruminant meat or dairy products;

(d) specifying circumstances for the purposes of clause 318 (3) (c) or subsection 319 (2);

(e) setting out criteria for the purposes of subsection 318 (4);

(f) governing nutritional standards for food and beverages and for any ingredient contained in food and beverages provided on school premises or in connection with a school-related activity;

(g) requiring a board to ensure that the standards referred to in clause (f) are met, and prescribing rules for when the requirement first applies to the board;

(h) prescribing rules for when a requirement set out in subsection 318 (1), (2) or 319 (1) first applies to a board.

Commencement

5. This Act comes into force on a day to be named by proclamation of the Lieutenant Governor.

Short title:

6. The short title of this Act is the *Healthy Food for Healthy Schools Act, 2008*.

EXPLANATORY NOTE

This Explanatory Note was written as a reader's aid to Bill 8 and does not form part of the law. Bill 8 has been enacted as Chapter 2 of the Statutes of Ontario, 2008.

The Bill amends the *Education Act* to add provisions regulating the trans fat content of all food and beverages sold in a school cafeteria. The Minister may make regulations exempting from the trans fat standards any food or beverage in which the trans fat content originates exclusively from ruminant meat or dairy products.

The Bill also adds a requirement for boards to ensure that food and beverages sold in vending machines comply with the nutritional standards set out in regulations. Power is given to the Minister of Education to create policies, guidelines and regulations governing nutritional standards for all food and beverages provided on school premises or in connection with a school-related activity.

Appendix B: Dissertation Research Proposals

Plan A: Dissertation Research Proposal (Aug 13, 2013).

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1. Working Title and Area of Focus

The impact of school food and the school-eating environment on the wellbeing of boys in the Toronto District School Board's (TDSB's) full-day kindergarten program

Area of focus:

-How the presence, or absence, of school food—in the form breakfast, snack and/or lunch programs—impacts on the wellbeing of male full day kindergarten students in the TDSB

-How school eating environments impact on the wellbeing of male students in the TDSB's full day kindergarten program

2. Nomination of Supervisor and Supervisory Committee

SUPERVISOR: Rod MacRae, Assistant Professor, Faculty of Environmental Studies

SUPERVISORY COMMITTEE

INTERNAL: Leesa Fawcett, Associate Professor, Faculty of Environmental Studies

EXTERNAL: Mustafa Koc, Professor, Sociology, Ryerson University

3. Research Problem

Overview of Research Problem

There is mounting concern for the health and wellbeing of Canadian children. One key component is diet and nutrition and, while those working in this area commonly point to the obesity epidemic, poverty and malnutrition, and the declining health of Canadian children, good food and positive eating environments contribute to a much wider array of positive outcomes. Indeed, I hope to demonstrate that food and eating environments have a significant impact on overall wellbeing.

At the same time, there is some consensus that schools should play a role in teaching students to make the connection between “what we eat and how it affects wellness” (TDSB online) given that “no other public institution has as much continuous and intensive contact with young people as do schools.” (Carter and Swinburn in Winson 2012, 206) Unfortunately, as the only G8 country without a national school food policy, Canada lags behind in the area of school food programming. Indeed, Making the Grade? School Nutrition Policies Across Canada (CSPI 2007) finds that “despite some particular strengths of certain school nutrition criteria, such criteria in Canada—where they exist—comprise a patchwork quilt of often weak, inconsistent guidelines.” (13) While there have been efforts, like the Children’s Health and Nutrition Initiative (CHNI)⁵⁹ and the Pan-Canadian Joint Consortium for School Health, Canada has yet to

⁵⁹ In 2007 FoodShare, Breakfast for Learning, the Centre for Science in the Public Interest (CSPI) and NDP MP, Olivia Chow, launched the CHNI in an effort to develop a national policy that would provide \$1 per school child per day for healthy food in Canadian schools (CHNI, Dorrell 2007).

institute any kind of national standards, policies or funding. Ultimately, if we hope to lobby for national standards, policies and funding, research is required to better understand what is, and is not, working in our current system.

As it stands, there are a great number of questions to be answered. Who are school food programs for (for example targeted or universal)? What are the objectives (for example reduction in obesity, alleviating hunger due to poverty, improved student nutrition, and/or food system education)? How are programs being implemented—is food prepared on site? do students have menu options? where do the students eat? who funds the program? what kinds of checks and balances need to be in place? Each of these questions requires serious consideration and study. It would seem that that these design issues have significant impacts on the efficacy of school food programs, but research is required to support this.

It is relatively easy to suggest that Canada should offer healthy food and food education to promote the health and wellbeing of its children, but the devil *is* in the details. At the macro level each of the provinces has its own set of evolving standards (however weak or inconsistent). Within the provinces, there are many different school boards and municipalities with multiple school boards. There are programs that may run across an entire board and projects that target specific populations or work with particular schools or even specific classes. At the micro level each student is where multiple realities collide—culture, class, age, place—impacting needs, preferences and, consequently, participation in school food programming. Evaluating and addressing the nutritional health and wellbeing of Canadian school children is all the more challenging because it requires the coordination and cooperation of so many actors.

As a consequence of the complexity of the issue, I have struggled with whether to attempt a broad, national level comparative study or to do a more focused, in-depth, local study and look for comparisons with available data elsewhere. For a variety of reasons, I am opting to do an in-

depth assessment of the wellbeing of boys in the Toronto District School Board's full day kindergarten program. Foremost among these reasons is that, as a mother of two boys, I both have a particular interest in the wellbeing of this group and I am well positioned to research this population. Additionally, younger children are especially susceptible to outside influences—like advertising and the presence of junk food in schools, on the one hand, or healthy living initiatives and food system education on the other hand—which adds weight to the questions of what exactly is being imprinted in the minds of these children. Also, this group may provide an initial cohort for what I hope may ultimately become a longitudinal study. Finally, while the unevenness of school feeding programs in Canada means that any locale is ultimately unique, this city offers an unparalleled diversity of people and a wide range of school food provisioning options.

At an anecdotal level, I have already observed some distressing patterns among junior kindergarten boys in the full day kindergarten program in the TDSB. For the first few months of school many parents complained that their boys were not eating *any* lunch at all (personal communications). Having seen the lunch room at my son's school, this is not surprising—approximately 120 four and five year old kids are supervised by 5 lunch room monitors and expected to eat their packed lunches essentially by themselves in about 20 minutes. The situation is bad enough that the teachers of students in all-day kindergarten were asking parents to please take their children home for lunch if possible. During these first few months, teachers commented that many of the male students appeared to be ravenous during the snack program operated three days per week by the Toronto Foundation for Student Success (TFSS) and parents complained that their four-year-old children were being sent to the principal's office for misbehaving in the lunchroom. While lunchroom eating seems to improve for some of the JK boys over the first year, several parents have observed that the TFSS snack program does not

offer the items outlined on the menu given to parents and one teacher complained about the high volume of “junk foods” such as chocolate chip cookies and chocolate milk for morning snack. It is evident that there is inadequate support at lunchtime, there may be inadequate checks and balances for this snack program, and there are definite consequences for the wellbeing of these male students.

Detailed Literature Review and Contributions

SCHOOL FOOD

Globally there are a variety of reasons cited as motivation for school food programs, but hunger alleviation remains the most common goal and characterizes the dominant models of school feeding. Increasingly, public health concerns and the obesity epidemic are also cited, as are questions of sustainable communities and food literacy (albeit in a significantly smaller proportion). Other objectives include promoting educational outcomes, punctual attendance, female enrollment, engaged participation and minimizing behavioural problems resulting from poor diet or inadequate food intake (Adelman et al 2007, Greenhalgh et al 2007, Kristjansson et al 2009). In a comprehensive literature review on the impact of nutrition on student performance at school, Taras explains that studies show that schools with food programs and breakfast programs, in particular, have lower rates of tardiness, better attendance rates and there appears to be a positive impact on cognitive skills in the short term (2005, 213)⁶⁰⁶¹. The literature on school feeding in the developing world also supports the finding that school food programs are associated with a range of positive outcomes such as enrollment and attendance (Galloway et al

⁶⁰ Taras also cites positive results in the areas of iodine insufficiency, iron deficiency (2005, 206).

⁶¹ Similarly, Behrman (1996), an economist who is critical of the way that many studies on health and nutrition impact education tend to conflate association with causality, nonetheless finds that “improving the health and nutrition of poor children can be an efficient way to improve school attendance and enhance economic growth.” (33)

2009), and physical and psychosocial benefits (especially for disadvantaged students) (Kristjansson et al 2009).

The impacts of school feeding programs are typically assessed in three categories: cognitive and educational benefits, health related benefits, and behavior and psychosocial benefits (Brown et al 2008). The impacts of breakfast, in general, on cognition are definitive—children perform some cognitive tasks, such as working memory, more successfully if they have had breakfast than if they have not (Pollitt and Matthews 1998, 804S). The impacts of school breakfast programs on cognition are clear when the study looks at children from low-income families—school breakfast programs are associated with “significant improvements in academic functioning among low income elementary school children.” (Meyers et al 1989, 1234 and Peterson et al 2003, 42, Brown et al 2008, 8) However, once more variables are introduced—snack and lunch programs for students from varying backgrounds—the data becomes much more nuanced and, frequently, results are statistically insignificant. Nonetheless, it is known that “even moderate undernutrition can have a lasting effect on children’s cognitive development and school performance” (Winicki and Jemison 2003, 145), these more nuanced results reflect challenges in school food program design and, in some cases, research challenges controlling for certain variables, for example innately smart or innately healthy children (Behrman 1996, 26). Thus, while there remain questions about the design of school feeding programs—for example, which meal and whether or not to employ a targeted approach—there is no doubt that good nutrition is positively associated with cognitive abilities. Similarly, good nutrition is positively associated with health, but the impact of school feeding programs on health is more complex and depends, to a large extent, on program design. By contrast, the psychosocial impacts of school food programs are definitive. Greenhalgh et al (2007) note, “Qualitative process data suggested that a meal at school can be a social event that engages, motivates, and stimulates the students.”

(859) Also, Brown et al (2008) cite six studies that find improvements in psychosocial functioning, including a study by the United States' Centre for Disease Control and Prevention that found strong evidence that school feeding programs “decrease rates of violence and aggressive behavior among school-aged children.” (11)

In Canada we have never implemented a national school food policy, we lack specific national standards for school food⁶² and school food funding regimes and, consequently, the provision of school food is fragmented, piecemeal, underfunded and uneven (Henry et al 2003, Russel 2004, 34, CSPI 2007, 13). Much of the peer reviewed literature on existing school food programs in Canada is overwhelmingly negative and primarily addresses stigmatization of both student participants and parents, reproduction of inequalities, and lack of evidence of benefit for child nutrition in targeted hunger alleviation school food programs (McIntyre & Dayle 1992; Raine et al 2003; Hay 2000; McIntyre et al 1999; Williams et al 2003). Williams et al (2003), Raine et al (2003) and McIntyre et al (1999) find that the majority of students using existing school food programs are “not poor and attended for other reasons, such as convenience and socializing.” (Williams et al 2003, 165) While these authors are critical of this, studies in the United States and elsewhere have found that the social benefits to school feeding are vast and contribute to a range of positive outcomes (Greenhalgh et al 2007). In fact, citing no less than 5 studies, Russell (2004) explains that school food programs enhance the school atmosphere and improve classroom behaviour (30)—factors which, through complex chains of relationships, lead to a range of beneficial educational and health outcomes.

WELLBEING

Early in my doctoral work I found myself drawn to the research emerging from positive psychology's new field of 'happiness studies.' With a Master's degree in International

⁶² In Canada, school food standards are set sub-nationally, at the provincial level.

Development Studies (Dalhousie 2005), I, like many others, had grown wary of the traditional measures of development such as Gross Domestic Product (GDP) and Gross National Product (GNP). In response to widespread dissatisfaction with existing tools, new measures emerged. For example, in the field of development, the United Nations' Development Program (UNDP) began putting together the Human Development Index (HDI) in 1990. Drawing on Nobel laureate, Amartya Sen's, work on the capabilities approach (CA), the HDI offers a comparative measure of health, education and living standards as a means of evaluating development (<http://hdr.undp.org/en/statistics/hdi/>). Later, drawing on the system of Gross National Happiness (GNH) developed in the tiny nation of Bhutan, a community of researchers developed the Genuine Progress Index (GPI) incorporating a wide range of measures (<http://www.gpiatlantic.org/gpi.htm>). Yet, after more than a decade of frequent travel to Cuba for employment and research, I still felt that these more robust measures were missing essential elements about lived experience, something about life satisfaction not present in the HDI or GPI⁶³. Happiness studies addresses this shortfall in-so-far-as it is dedicated to the scientific study of subjective wellbeing (Journal of Happiness Studies homepage) though, insofar as it gives weight to subjective feelings over the experience of objective reality, it is not entirely well suited to my research.⁶⁴

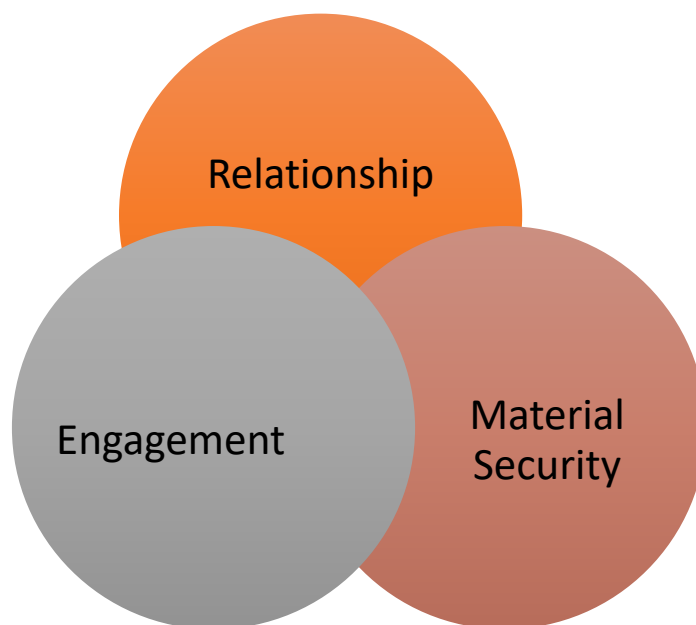
Consequently, as part of my work on my first comprehensive (2007-08) and drawing on my background in evaluating public policy in International Development and research in the nascent field of Happiness Studies, I began to develop my own model for wellbeing (WB). At the time, two sets of terms dominated the field. Diener and Seligman (2004) found that WB

⁶³ This missing element did seem to be present in Bhutan's GNH, but the model did not seem to easily translate to other contexts.

⁶⁴ I am more interested in eudaimonic notions of the flourishing of human potential than hedonistic notions of life satisfaction. Much of the work in happiness studies tends towards the latter, though the distinctions are becoming clearer since the early days of happiness studies.

includes: 1) positive emotions and moods or The Pleasant Life; 2) engagement or The Good Life, and; 3) having meaning in life or The Meaningful life (4, 21). Ruut Veenhoven (2000), professor emeritus of social conditions for human happiness at Erasmus University Rotterdam in the Netherlands, described WB as an umbrella term addressing three main areas: 1) favorable living conditions; 2) relevant competencies,⁶⁵ and; 3) the balance of outcomes of life⁶⁶ (94-95). In both cases the usual demographic variables measured for WB include age, income, employment, marital status and education levels (Graham and Pettinato, 2000, 240). Drawing on these early definitions, I developed a model for WB that includes three main components—material security, relationship and engagement—with meaning at the core (Bas 2008).

[NOTE: I'm not too tech savvy and am having a hard time figuring out how to write the word meaning in the centre of the diagram.]



⁶⁵ This reflects some of what Sen covers with his Capabilities Approach (CA).

⁶⁶ Veenhoven (2000) notes analogous concepts in biology—biotype, adaptation, and survival—and in systems theory—input, throughput, and output (94).

Over the course of the last decade, there has been a proliferation of research in the fields of positive psychology, happiness studies and wellbeing—so much so that there is now an emerging literature that aims to clarify the increasingly blurry and broad definitions of wellbeing (Hascher 2008, Crivello et al 2009, Gasper 2010, Forgeard et al 2011, Jayawickreme et al 2012). Most recently, three of the most prominent researchers in the field, Jayawickreme, Forgeard and Seligman (2012), came together to review the field and propose a model for future research, their “Engine for Well-being.” Jayawickreme et al (2012) find that there are three main categories of wellbeing theories—*liking* approaches favoured by psychologists, *wanting* approaches employed by economists and *needing* approaches relied on in public policy and psychology. Drawing on Sen’s work on the capabilities approach (1999) and Seligman’s later work on flourishing (2011), these authors propose an integrative framework that delineates *inputs* that enable wellbeing (like education, health, and good nutrition), *processes* (internal states that influence wellbeing), and *outcomes* that reflect the attainment of wellbeing. With respect to public policy, Jayawickreme et al (2012) argue that a “well-being index that is useful to public policy needs to be more transparent, to integrate subjective and objective measures into superordinate variables, and to separate measures of input from measures of process from measures of outcomes.” (337)

Understood through the lens of this ‘engine,’ my model for WB, in line with both Sen’s work and Seligman’s more recent work,⁶⁷ is a needing-eudemonic⁶⁸ theory of wellbeing that evaluates the efficacy of inputs based on outcomes.

EVALUATING SCHOOL FOOD FOR WELLBEING

⁶⁷ In his book, *Flourish* (2011), Seligman redefines the endpoint of his theory as “well-being” rather than “happiness.” Here he explains that wellbeing consists of pursuing and attaining one or more of these key things: positive emotion, engagement, relationships, meaning and accomplishment.

⁶⁸ Jayawickreme et al (2012) delineate between ‘hedonic’ measures, like subjective well being (SWB) that evaluate positive and negative affect as well as cognitive measures of life satisfaction and ‘eudemonic’ measures that “assess the extent to which individuals are ‘doing well’ (rather than merely ‘feeling good’) by looking at constructs such as meaning, purpose, engagement, and flow, among others.” (328)

The explosion in the popularity of research on wellbeing has brought with it a multitude of tools for measuring it. There are subjective metrics of wellbeing that measure happiness, affect, life satisfaction, engagement, meaning, relationships and competence using techniques like the Day Reconstruction Method and the Experience Sampling Method to assess anywhere from 7 to 100 dimensions. Though this work on life satisfaction, positive and negative affect falls outside my research area, my non-exhaustive review of recent work on Subjective Well Being SWB (i.e. in the last 10-15 years) revealed no less than 18 such tools. Similarly, the area of psychological theories of wellbeing (PWB) has produced personal growth models, life-span development perspectives and positive mental health models, each with a range of evolving tools. With respect to my research, a great number of Objective Well Being (OWB) measures or *needing* accounts have emerged. While Forgeard et al (2011) only specifically point to two tools—the United States General Accounting Office’s (GAO) list of Key National Indicators (KNI) and the United Nations’ Development Program’s Human Development Index (HDI)—Alkire (2002) identifies 39 attempts to define a ‘good’ or ‘flourishing’ life, at varying levels of analysis, and I have encountered countless tools, the Canadian Index of Wellbeing (CIW) among them. None of these tools, however, effectively lends itself to an assessment of school food or school eating environments for wellbeing.

There is, of course, another set of literature on wellbeing directed specifically at children. This literature has its own set of challenges. Pollard and Lee’s (2003) “Child Well-Being: A systematic review of the literature” finds that “inconsistent use of definitions, indicators, and measures of well-being has created a confusing and contradictory research base” (69), there is “no standard method to assess well-being in children” (68) and that there are literally “too many instruments to count” (68). Against this backdrop, there are relatively few models designed

specifically to assess wellbeing in school or student wellbeing and, when the dimension of food is added, there are even fewer.

From this vast array of measures, models, instruments and tools only two are relevant to my study, though neither addresses school food in a meaningful way. The first model, a conceptual model for wellbeing in schools, was developed in 2002 by two Finish scholars, Konu and Rimpela⁶⁹. Drawing on Allardt's sociological theory of welfare, Konu and Rimpela argue that wellbeing is a state in which it is possible for a person to meet their material and non-material needs. Allardt divides these needs into three categories, *having*, *loving*, and *being* which Konu and Rimpela adapt to the school context as "school conditions," "social relationships," and "means for self-fulfilment," respectively. They add a fourth dimension, "health." Each dimension is broken down into four-to-seven sub-areas, "school lunches" being one of 22 areas to be considered (see appendix). The second relevant model is a "Student Well-being Research Framework" developed by Ontario Ministry of Education in 2011 as a response to the December 15, 2009 Bill 177 that provides that "boards shall promote student achievement and well-being." The framework presented here offers three dimensions of student wellbeing—*physical*, *cognitive*, and *psycho-social*—across three levels of analysis—student measures, classroom measures, and school measures. Across the nine areas, this model offers 25 sub-areas, none of which include school food (see appendix). Nonetheless, this model's dimensions—*physical*, *cognitive*, and *psychosocial*—align very well with my model for WB's dimensions of material security, engagement and relationship, respectively. This model's dimensions also align with the assessment categories for school food—health related benefits, cognitive and educational benefits, and behavior and psychosocial benefits, respectively. Thus, as I adapt my model for

⁶⁹ Hascher (2008) describes this as the only instrument that exists for assessing wellbeing in school (85).

WB I will draw on this conceptual model for student wellbeing for some of the sub-areas and research questions and on the student wellbeing research framework for broad structure.

GAPS IN THE LITERATURE

Significant portions of the literature on school feeding deal primarily or exclusively with the third world (Taras 2005, Behrman 1996, Levinger 1992, Kristjansson et al 2009, Galloway et al 2009, Adleman et al 2007, Aldinger & Jones 1998, Bundy et al 2009) and there is also a great deal of literature on the US (Russell 2004, Peterson et al 2003, McLaughlin et al 2002, Todhunter 1970, Meyers et al 1989, Finkelstein et al 2008, Allen and Guthman 2006, Bagdonis et al 2009, Graham et al 2004, Joshi et al 2008, Ozer et al 2007), but there is comparatively little literature on school food in Canada. Much of the literature on school food in Canada is heavily focused on school food as an ineffective targeted hunger alleviation strategy (McIntyre & Dayle 1992; Raine et al 2003; Hay 2000; McIntyre et al 1999; Dayle & McIntyre 2003; Williams et al 2003). Beyond this literature, there is a good number of provincial handbooks on establishing student nutrition programs and reports by charitable organizations that help to fund school food programs, like Canadian Living's Breakfast for Learning or Evergreen. Given that we lack national standards, what standards we do have are at the provincial level and school feeding in Canada is typically pieced together through complex, mixed funding sources, relying heavily on non-governmental funders, the landscape of the literature is not all that surprising. Nonetheless, a systematic assessment of the efficacy of various school feeding models is needed, especially if we hope to establish national standards. While my research project will by no means provide an exhaustive review of school feeding models in Canada, my work will address this gap in the literature. Additionally, because the full-day kindergarten program in the TDSB is quite new, it is important to inquire as to how this new program is impacting children.

Similarly, while there is a rapidly growing body of literature on wellbeing, there are important gaps. The literature on wellbeing delineates between hedonic and eudaimonic wellbeing approaches, offers models that measure subjective wellbeing (SWB), psychological wellbeing (PWB) or objective wellbeing (OWB) and, more often than not, relies on survey data from questionnaires, or the use of various experience sampling methods of quantitative data collection. There is a subset of this literature that deals with children, but this literature: 1) rarely addresses children as students; 2) when the school setting is considered, school food is given marginal importance, at best, and; 3) has never directly addressed the wellbeing of young children in the school setting⁷⁰. My research will address these three gaps in the wellbeing literature.

Key Research Questions

- 1) How is the school eating environment impacting the wellbeing of boys in the Toronto District School Board's (TDSB's) full day junior kindergarten program? (Consider the absence or presence of school food programs, location of lunch and snack times, type of adult supervision, crowding, number of children present, sound environment at eating times, integration with the curriculum, etc.) Does this impact change over time? (i.e. fall, winter and spring terms)
- 2) Is there a positive correlation between the presence of student nutrition programs (e.g. breakfast, snack, lunch, farm to school) and boys' wellbeing at school? Does program design affect the wellbeing impacts?

4. Conceptual/Theoretical Framework

SCHOOL FOOD

⁷⁰ Pollard and Lee (2003) find that most indicators of child wellbeing are designed for older children (65).

School food refers to foods consumed either at school or during the school day. This includes packed lunches and snacks, breakfast, lunch and snack programs, and the food consumed by students who leave the school premises during the school day either to eat at home or elsewhere. When examining food, things to consider include: Where did the food come from? Is it sustainably or locally sourced? What kind of food is it? What is the quality of the food? Who provides the food? Who prepares the food? What foods need to be excluded either for reasons of allergy or cultural or religious sensitivity?

SCHOOL FEEDING PROGRAM

A school feeding program is any program that offers school food as part of a school program.

SCHOOL-EATING ENVIRONMENT

The concept of the school-eating environment (SEE) is both concrete and abstract. In concrete terms, the SEE refers to the material conditions available for the provision and consumption of school food. Material environments can have a great impact on food consumption. Are students eating in classrooms, lunchrooms, cafeterias or hallways? What kind of supervision is there? Are the spaces enjoyable and relaxed? Noisy? Overcrowded? My four and a half year old son eats lunch in a crowded lunchroom he describes as, “so loud I can’t hear,” with lunchroom monitors the children see at no other time during the day. By contrast, the same students eat snack provided through the Toronto Foundation for Student Success in their classroom with their teacher, their early childhood educator (ECE), and parent volunteers with relative ease. Parents and teachers alike attest to the fact that these different material environments have a significant impact on how and what the children eat. Indeed there is a body of literature that specifically addresses the importance of the meal environment for children (Woodruff and Hanning 2009, Spurrier et al 2008, Stroebele and de Castro 2004), the impact of

school food environments on children's dietary habits (Briefel et al 2009) and the relationship between parental influence, home meal environments, school meal environments and children's eating habits (Ishdorj et al 2013, Krolner et al 2009, Boutelle et al 2003). The material SEE is an essential dimension in assessing the wellbeing impacts of school food for boys in the TDSBs full day kindergarten program.

The school-eating environment also connotes the broader social and political environment surrounding school food. At the most immediate level, SEE addresses the psychosocial element of wellbeing—the students' relationships with peers, adults and food while consuming food at school. Beyond this are the relationships among the administrators, staff/feeding supervisors and food providers at the school. The parents' relationships with all of these actors are another important level—most children eat all, or nearly all, of their meals either with their parents (or guardians) or at school—parents' attitudes (inward and outward) about school food have a profound impact on the eating habits of young children. Finally, there is the broader political context of school feeding—the trustees, the school boards, municipal and provincial governments, and, in some cases, outside actors like organizations running farm-to-school programs like salad bars, cafeteria options, garden programs and the like. Each of these relationships influences the SEE and, therefore, impacts on the wellbeing impacts of school food.

WELLBEING

As noted above, wellbeing is both an increasingly popular area of research and (perhaps consequently?) an increasingly blurry and difficult concept to define. For the purposes of my work, I will draw on my model for WB which proposes three main dimensions—material security, relationship and engagement—viewed as a Venn diagram with meaning at the core (see above). In line with the work of Nobel-laureate, economist and development philosopher, Amartya Sen, this model provides a framework that promotes the expansion of opportunities for

people to “live the kind of lives that people have reason to value” (1999, 295). Having drawn on the early work of one of the leading researchers in the field of positive psychology, Martin Seligman, my 2008 model bears great resemblance to his more recent five elements of wellbeing—positive emotion, engagement, meaning, positive relationships and accomplishment (2011)—with the exception that, as a psychologist, he includes consideration of affect whereas I, with a background in development theory, find that it is essential to consider material conditions. Through the course of my dissertation work, I expect that my model will become more robust.

Note:

- There is a lot of literature that talks about things like “promoting student health and wellbeing” that does not seem to be specifically assessing wellbeing (eg Saad 2009), therefore there is a need to delineate between WB as a framework for assessments and the ‘casual’ use of the word wellbeing in other kinds of toolkits.
- Also, while there is a great deal of overlap between wellbeing and wellness, these are two distinct concepts. Wellbeing, as I have outlined above, is a relatively new concept whereas the wellness movement began shortly after the Second World War (Miller et al 2010, 5). The two concepts are closely interrelated because both are holistic and each one contains the other: most concepts of wellbeing include good health as a precondition and Miller et al (2010) explain, “the dominant view of wellness is that it is holistic and that an absence of illness and a state of well-being are both essential.” (6) The underlying difference, as I see it, is that WB gives primacy to the psychological experience whereas wellness leans towards the physiological experience. That said, proponents of either concept would argue that psychological and physiological experiences are deeply intertwined and cannot be considered in isolation. I prefer the concept of WB because it also includes consideration of broader social phenomena.

STUDENT WELLBEING

For the purposes of this study, student wellbeing refers to both the wellbeing of students while they are at school and the wellbeing of the student as it relates to school. For example, studies of the impacts of Farm-to-School find that benefits of changed eating habits extend to the children's home lives (Joshi et al 2008, 233) and studies on the importance of meal environments find that there is a great deal of interaction between home and school environments (Ishdorj et al 2013 and Krolner et al 2009). Thus, student wellbeing refers to any and all elements of the children's present wellbeing that relate to the school, school food and the school-eating environment.

5. Research Methodology, Design and Methods

Methodology

My goal in this research project is to assess how school food and the school-eating environment impact on the wellbeing of boys in the TDSB's full day kindergarten program. While there is some concern regarding the validity of children's self-reporting (Ben-Arieh 2005, 581 cites Bianchi and Robinson 1997, Plewis et al 1990 and Medrich et al 1982), there is a growing movement to include children in research on the wellbeing of children (Crivello et al 2009, Ben-Arieh 2005, Hascher 2008, Prilleltensky 2010). In the face of potentially great logistical challenges, I aim to conduct a participatory research project.

In line with Peter Reason (1994), I am a proponent of an emerging worldview that is more "holistic, pluralist and egalitarian" and "sees human beings as co-creating their reality through participation" (3) and, consequently, I am a proponent of participatory research. In participatory research, "the knowledge and experience of people—often oppressed groups—is directly honoured and valued." (12) Reason explains that Participatory Action Research (PAR)

has two main objectives: 1) to produce knowledge and action directly useful to a group of people, and 2) to empower people at a deeper level “through the process of constructing and using their own knowledge” (12). A third important point is authentic commitment to a genuine collaboration (13). My research will possess each of these characteristics though, given the extremely young age of my participants, the action items will, by necessity, be modified and I will consult with adults who observe and participate in the school-eating environment. Given the limited spaces for children’s voices and the importance of self-reported information when evaluating wellbeing, a participatory approach is essential.

Until very recently, most of the research on children’s lives has treated children as “passive objects that are acted upon by the adult world” (Ben-Arieh 2005, 577) and has excluded children from research involving them and their wellbeing (Crivello et al 2009, 57 cite nine sources to this effect). By contrast, child-focused research “affirms children as competent social actors, the ‘experts in their own lives’, and therefore valid sources of data.” (Crivello et al 2009, 52) If we accept children as agents in their own lives, the reliability question remains. In response to this, Ben-Arieh (2005) cites research that shows that “studies directly involving children have yielded just as good response rates and reliability (and sometimes even better) as studies using adults to report on children’s well-being.” (579-580) Indeed, in an article on child wellness and social inclusion, Prilleltensky (2010) argues, “children can have powerful voices, but they will remain unheard until spaces for their expression are created and nurtured.” (247) The task, then, for researchers is to commit to a participatory methodology and develop methods that facilitate genuine child participation.

The most promising approach for research with young children that I have encountered thus far is the Mosaic approach (Clark and Moss 2001). Three theoretical perspectives underlie it. First, children are seen as “social actors who are ‘beings *not* becomings’ (Qvortrup et al 1992,

2)” thereby placing emphasis on exploring children’s perceptions of their lives, their interests, priorities and concerns (Clark 2005, 12). The second key theoretical concept is the concept of voice that emerged from Participatory Appraisal techniques in the field of international development. These techniques include both visual and verbal tools devised initially to make the voices of the least powerful adult members of a community heard. The third theoretical perspective hinges on the notion of the competent child, the pedagogy of listening and the pedagogy of relationships. The authors of the mosaic approach were inspired by the municipal preschools of Reggio Emilia and the notion of a “rich active child” (12).

One of the key cornerstones of practice in Reggio Emilia is the pedagogy of listening described by Rinaldi (2005) (in Clark 2005, 16). This approach identifies three key elements: internal listening or self-reflection, multiple listening or openness to other voices and visible listening, which includes documentation and interpretation. Briefly, internal listening is about the reflective process and finding ways to help children find meaning in what they do. In the research context, the multi-method framework, employing a variety of methods each of which may work for children with differing learning styles, offers students an opportunity to look at the same question in a variety of ways, enabling participants the opportunity to meaningfully engage (17). For example, Clark describes a four-year-old child participant with limited verbal skills who was able to communicate more easily with drawings and pictures (19). Multiple listening acknowledges the validity and importance of multiple perspectives, including practitioners who work with the child participants (20), whereas visible listening addresses the way that having children engage as co-documenters allows them to take control of the meaning-making within the analysis (23-24). The mosaic approach seems ideally suited to evaluating the wellbeing impacts of school food and the school-feeding environment on boys in the TDSBs full day kindergarten program.

Methods

In a recent book chapter on the Mosaic approach, written by one of the original authors, Clark (2005) outlines six main elements of the approach. She describes it as multi-method, participatory, reflexive, adaptable, focused on children's lived experiences and embedded in practice⁷¹ (13). The approach combines traditional methods of observation and interviewing with participatory tools in order to create an image of children's worlds—an image that is absolutely essential for a meaningful assessment of any child's wellbeing.

MOSAIC—STUDENT/CHILD PARTICIPANTS

My research will follow the mosaic approach's three stage model: 1) gathering perspectives; 2) discussing the material; and 3) deciding on areas of continuity and change (Clark 2005, 15). In the first stage, student/child participants will take me on a tour of their school-eating environment(s)—lunchroom, spaces for snack, drinks, where the food is kept and/or prepared. As in the mosaic approach, the students will have a camera to take pictures and will have an opportunity to draw pictures. Both sets of images will then be used by the students to map out their school-eating environment(s) (13). This stage will happen one-on-one and will also involve data collection from parents and other actors in the school-eating environment (see discussion below). The second stage offers an opportunity to dialogue with the children about their images and maps. Clark notes that while “reflecting on meanings and reassessing understandings is implicit throughout the whole approach, ... the second stage allows a concentrated period of reflection.” (15) This stage, too, will be one-on-one. Finally, in the third stage, the student/child participants will have the opportunity to come together, share their maps

⁷¹ This is similar to other participatory research methods involving young children. For example, the ‘Young Lives’ qualitative research methodology is characterized as qualitative and longitudinal, child-focused and participatory, multi-actor, flexible and reflexive, mixed- and multi-method, and responsive to ethical issues (Crivello et al 2009, 55). The main difference is that the mosaic approach offers both methodology and methods for working with children as young as 3 or 4 years old.

and discuss together ideas that they think would improve their school-feeding environment. Ideally, these three stages will occur over the course of the fall term. Early in the winter term I will revisit the student participants to discuss their feelings on the school-feeding environment. Finally, late in the spring I will, once again, meet with the student participants and offer focus groups with the parent-participants. This is because, while I have not encountered any literature, I have received anecdotal accounts that young boys ability to cope with difficult school feeding environments (eg noise, overcrowding) changes, sometimes significantly, over the course of the school year.

SCHOOL FOOD DIARIES—PARENTS AND SCHOOL FOOD STAFF & VOLUNTEERS

The food consumed by the children is an important piece of this research. Because the participants are so young, the keeping of school food diaries will necessarily involve parents and adults. The structure will vary slightly depending on the model of school food employed. Broadly, the diaries will be one week long each. Parents/guardians of student participants will note what is packed in their child's lunch and what comes home. Most schools now have 'waste free' lunchrooms with no garbage cans so uneaten food typically goes home with the student. School food providers will note what is on the menu for breakfast, lunch or snack, what is served and, generally, what the students seem to be eating. If possible (ethics, permissions), I will attend each school site for the week of the school diaries and take field notes on the content of the school food to supplement this data.

SURVEY AND FOCUS GROUP—PARENTS AND GUARDIANS

While parents and guardians are removed from the school-eating environment, they likely know their children better than anyone else. In addition to contributing to a 1-week food diary, I hope that parents will complete a survey regarding both what they see as the strengths and weaknesses of the school-eating environment and school food are generally and as they pertain

to their child specifically. Additionally, in this survey I will ask parent participants about their household information—family structure, parental work/home schedules, family income range, education level of parents, ethno-cultural background, whether there are any forbidden foods, etc. After this data has been collected (and following the first two stages of the mosaic work with child participants), I will put together a focus group at each school to discuss the strengths and weaknesses of school food and the school-eating environment, as they understand it. Following stage three of the mosaic work with child participants, I will put together one focus group for parents from all three schools.

SEMI-STRUCTURED INTERVIEWS—KEY ACTORS

In order to round out the data base, I will conduct semi-structured interviews with key actors in the area of school food and the school-eating environment. This includes lunchroom monitors, snack and breakfast program volunteers, and school food providers. Additionally, I hope to interview teachers regarding their observations about the impacts of school food, principals regarding the politics of what has and has not happened at their school, and, possibly, other key actors in this area. For example, it would be useful to interview the liaison public health nurse and the healthy schools manager as they both work to oversee work in this area.

OBSERVATION FIELD NOTES

Because of the way that the Mosaic approach emphasizes “the creative ways that children express their views” (Clark and Moss 2001, 5), “symbolic communication” (6) and “listening with all our senses” (7), field notes will be an indispensable component of my research project and will need to be coded and analyzed along with other data. In addition, following each session with students, parents, staff and key actors I will take field notes to account for any information not documented in the recorded data, such as demeanor, tone, etc. In her chapter on “Making sense as a personal process,” Marshall (1981) describes the importance of being able to relive the

impressions and feelings at the time of interview (396) in order to move towards unearthing “chunks of meaning” (397). I, too, will use my field notes to ‘take me back’ to the context as I approach analysis. In addition, I will include coded findings from my field notes in my data displays as I analyze the data.

RECRUITMENT

I aim to conduct my study at three schools with full day kindergarten in the TDSB. Ideally, I’d like to identify one school with a high level of integrated school food programming, one with little or no school food programming and one that fits somewhere in the middle. I plan to identify schools with the support of FoodShare’s Executive Director, Debbie Field, and their Senior Manager of Schools and Student Nutrition, Meredith Hayes. Once I have identified schools and have the support of the principal, I will begin to recruit participants. This will happen along a variety of pathways. Once I have obtained permission from the TDSB, I hope to attend parent council meetings to meet parents, send home letters with the schools’ weekly information packages and speak with both principals and kindergarten teachers as a way of recruiting student and parent participants. Ideally, I will identify 5-10 student participants at each school. I will approach key actors at the schools, hopefully with the support of the principal, administrators and teachers.

Analysis

I will analyze my data using Miles, Huberman and Saldaña’s (2013) six classic analytic moves (10) and three concurrent flows of activity (12-14), influenced by Marshall’s “Making sense as a personal process” (1981) and “Living life as inquiry” (1999). Miles, Huberman and Saldaña’s classic, sequential analytic moves are:

-Assigning codes or themes to a set of field notes, interview transcripts or documents

- Sorting and sifting through these coded materials to identify similar phrases, relationships between variables, patterns, themes, categories, distinct differences between subgroups and common sequences
- Isolating these patterns and processes, and commonalities and differences, and taking them out to the field in the next wave of data collection
- Noting reflections or other remarks in jottings, journals, and analytic memos
- Gradually elaborating a small set of assertions, propositions, and generalizations that cover the consistencies discerned in the database
- Comparing those generalizations with a formalized body of knowledge in the form of constructs or theories. (1)

Obviously, I will first need to interpret and code the children's drawings, maps and photographs.

Miles, Huberman and Saldaña (2013) describe analysis as three concurrent flows of activity: data condensation, data display, and conclusion drawing and verification (12). They argue that data condensation makes the data stronger by focusing, sorting and organizing it such that 'final' conclusions can be drawn and verified (12). Given that I aim to include outlying, confirming and disconfirming data, I will need to use extreme caution in this step, especially because I will be interpreting visual data. For this reason, I hope to consult with child participants in child conferences (Clark and Moss 2001, 15) as I interpret the pictures, maps and photos they generate.

"Generically," explain Miles, Huberman and Saldaña, "a *display* is an organized, compressed assembly of information that allows conclusion drawing and action." (12-13) Given the high volume of data, good displays (matrices, graphs, charts and/or networks) are essential. Miles, Huberman and Saldaña note that large amounts of text tend to "overload our information-processing capabilities and preys on our tendencies to find simplifying patterns" (13) and both

they and Marshall (1981) note that this can lead to giving excessive weight to the ‘loudest’ voices (Miles, Huberman and Saldaña 2013, 13 and Marshall 1981, 396). Generating displays will facilitate a more systematic interpretation of my data [though, at this point, I feel like I will need the wall of a gym to post my data display/s].

The third stream of analytic activity in Miles, Huberman and Saldaña’s account is conclusion drawing and verification. Both these authors and Marshall advocate holding early conclusions “lightly, maintaining openness and skepticism” (2013, 13) and allowing arising ideas to develop with loose connections (1999, 4), respectively. Marshall (1981) explains that throughout the iterative process of research and analysis “categories build up” and “chunks of meaning” emerge (397). At the same time, these conclusions must be verified in a similar fashion and Reason and Rowan (1981) stress the importance of sifting through findings “over and over again” (248). Miles, Huberman and Saldaña propose review of original field notes and review among colleagues to develop intersubjective consensus (13). As I aim to conduct my research in a participatory fashion, I will add review with child participants to this list as in Reason and Rowan (1981, 248) and Clark and Moss (2001, 15).

Validity and Reliability of Data

In their chapter on “Issues of Validity in New Paradigm Research”, Reason and Rowan (1981) argue that by developing the notion of perspective we can get away from notions of objectivity and subjectivity (241) and that

we have to learn to think dialectically, to view reality as a process, always emerging through a self-contradictory development, always becoming; reality is neither subject nor object, it is both wholly independent of me and wholly dependent on me. This means that any notion of validity must concern itself both with the knower and with what is to be known: valid knowledge is a matter of *relationship*. (241)

Also, citing Maruyama (1978), they argue for moving beyond the notion of one truth explaining that knowledge within a heterogenistic epistemology is:

Polyocular: binocular vision enables us to see three-dimensionally, because the *differential* between two images enables the brain to compute the invisible dimension.

Cross-subjective analysis enriches our understanding. (242)

In line with this thinking, I intend to move towards intersubjectively valid knowledge, that is, an interpretation that is “right for a group of people who share a similar world” (243). In my pursuit of that goal, I will take the following measures:

- 1) Offer *thick* descriptions. Marcel (2001) explains, “thick constructivists contextualize human behavior in an effort to understand it.” (4) She offers the example of two boys rapidly contracting their right eyelids—one due to an involuntary twitch and the second, winking conspiratorially. She introduces two more boys, also contracting their right eyelids—the third parodying the second boy and the fourth rehearsing a parody of the second boy. Whereas a *thin* description would note that there were four winking boys, a *thick* description would consider the *meaning* of these acts and describe “twitching”, “winking conspiratorially”, “parodying” and “rehearsing” (4-5).
- 2) Engage in multiple *cycles or stages* of research. Reason and Rowan (1981) argue that “one of the most characteristic things about good research at the non-alienating end of the spectrum is that it goes back to the subjects with the tentative results, and refines them in the light of the subjects’ reactions.” (248) Given the young age of my research participants and the high degree of interpretation required for draw-and-tell components, this cycling and re-cycling “over and over... and over and over again” (248) will be particularly important in order to unearth participants’ intended meanings.

- 3) Seek out colleagues, peers and mentors to *challenge* my interpretations. Again, due to the high degree of interpretation, “people who will offer support and people who will challenge and confront” will offer an invaluable safety (Reason and Rowan 1981, 247).
- 4) Maintain *high quality awareness*. Two threats to validity in human inquiry are unaware projection and consensus collusion (Reason and Rowan 1981, 244). The antidote to these problems is to maintain *high quality awareness* because “we cannot study human processes except as aware human beings” (246). Thus, “the researcher must *actively* explore the stirrings of his or her own unconscious while engaged in research” (246) because “validity in new paradigm research lies in the skills and sensitivities of the researcher... [and] is more personal and interpersonal, rather than methodological.” (244) To this end, I have contacted a relational psychotherapist who is willing to consult with me on my research, should I require it.
- 5) *Exclude nothing* from the analysis. Treat nothing as an outlier and look for both confirming and disconfirming data in my project.
- 6) *Expose my biases*. I am a proponent of healthy school food initiatives that offer farm-to-school food as part of an experiential education program. I will be clear about this preference, lest it effect my interpretation of the data.
- 7) Be *cautious of early impressions*. The voices that are the loudest, whether happy or unhappy, are often over-represented in initial impressions (Marshall 1981, 396). I will aim to set these impressions aside and base my interpretations instead on my *cycles* of research with participants.

6. Tentative Outline of Dissertation

Research plan

Ideal	Month	Phase	Kids	Observations	Lunch room monitors	Food diaries	Parents	Key actors: Policy makers, principals, teachers, ECEs
Sept	Oct 2013	Phase 1	Stage 1: Mosaic information gathering—cameras, tours and mapping (approx. 1 hour)	During each phase, at each school: a minimum of one full day of observation, probably one full week in conjunction with food diaries	During each phase, at each school: a brief interview with a lunch room monitor	During each phase, for each student: photograph and take notes on lunch box content at arrival and before departure for one week	Survey questionnaire for parents of participating children and one focus group per school.	Interview at least one policy maker, the principal of each school, one teacher per school and one early childhood educator per school
Sept	Nov 2013	Phase 1	Stage 2: child conferencing—piece together maps, reflect on and interpret information gathered (approx. 15-30 min)				Brief phone survey: are there any issues that stand out for you?	
Jan	Feb 2014	Phase 2	Mid-year visit: reflect on phase 1 info one-on-one; ask if we need more information collected (approx. 15-30 min)					
June	May 2014	Phase 3	Action items: reflect on information gathered, the				Focus groups for parents, one at each school	

			school year and what they would change in a group setting. Share maps, make it a game (approx. 1 hour)					
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NOTE: The ideal timing for my research—Phase 1 in September, Phase 2 in January and Phase 3 in June—is not possible because the TDSB does not allow research to be conducted during those busy times in the academic year. Consequently, I will conduct my research phases as close to those dates as possible.

Dissertation chapter headings

Chapter 1: intro & theoretical framework

Chapter 2: lit review

Chapter 3: methodology & methods

Chapter 4: Case 1—a school with little or no school food programming

Chapter 5: Case 2—a school with some school food programming

Chapter 6: Case 3—a school with a high level of school food programming/integrated, experiential education, *if possible*

Chapter 7: Comparative analysis

Chapter 8: Conclusions and Future Research Needs

7. Study Limitations/Delimitations

Because of the limited number of participants (15-30 student participants), my research project will not produce statistically relevant data. Instead, it will offer a meaningful, in-depth exploration of the impact of school food and the school-eating environment on the wellbeing of boys in the TDSBs full day kindergarten program. I am somewhat concerned that, because marginal groups (e.g. low income families, new immigrant families) tend to be underrepresented

in parent advisory councils and other similar groups, these participants will be difficult to recruit. If that is the case, there may be an overrepresentation of middle class families. That said, this may help to focus my grouping for thick descriptions.

8. Short- and Long-term Goals

Prior to my maternity leave (May 2012-April 2013), I began to put together an application for the MITACS Accelerate Research Internship program. This program offers matched funding for graduate students to work with business or, in some cases, not-for-profit industry partners. Through dialogue with Canadian Living’s Breakfast for Learning and Sustain Ontario, I had secured sufficient funding for a 4-month internship. Since the beginning of my maternity leave both organizations have undergone changes in management, so I need to re-confirm these partnerships. I hope to conduct my doctoral research as part of this program. Additionally, I am interested in pursuing a larger wellbeing assessment project following the completion of my doctoral work, possibly as part of the MITACS Step Post-Doctoral Fellowship program.

9. Proposed Timeline

Proposed Timeline—PhD 5 & PhD 6

May 2013	Dissertation proposal—draft	
June 2013	Dissertation proposal—draft	
July 2013	Dissertation proposal—submit to Rod July 16 Dissertation proposal—revise Dissertation proposal—submit to committee	2-week daycare closure
August 2013	Ethics proposal—draft Ethics proposal—submit to Rod Ethics proposal—revise Ethics proposal—submit Mitacs Accelerate Proposal—draft Mitacs Accelerate Proposal—submit to Rod Mitacs Accelerate Proposal—revise	

	Mitacs Accelerate Proposal—submit to Mitacs Dissertation proposal—defense Aug 20 Dissertation proposal—revisions Dissertation proposal—submit to FGS	
September 2013	TDSB Research Ethics proposal—draft TDSB Research Ethics proposal—submit to Rod TDSB Research Ethics proposal—revise TDSB Research Ethics proposal—submit to TDSB Field work—network and secure 3 participating schools	TA
October 2013	Field work—network and secure participants Field work—begin phase 1	TA
November 2013	Field work—phase 1	TA
December 2013	Field work—coding	TA
January 2014	Field work—coding	TA
February 2014	Field work—phase 2	TA
March 2014	Field work—coding Field work—analysis	TA
April 2014	Field work—analysis	TA
May 2014	Field work—phase 3 Field work—coding Field work—analysis	TA
June 2014	Field work—analysis	
July 2014	Dissertation—Chapter 1: intro & theoretical framework	2-week daycare closure
August 2014	Dissertation—Chapter 1: intro & theoretical framework	

Proposed Timeline—PhD 7

September 2014	Dissertation—Chapter 2: lit review	
October 2014	Dissertation—Chapter 3: methodology & methods	
November 2014	Dissertation—Chapter 4: Case 1—a school with little or no school food programming	
December 2014	Dissertation—Chapter 5: Case 2—a school with some school food programming	
January 2015	Dissertation—Chapter 6: Case 3—a school with a high level of school food programming/integrated, experiential education, <i>if possible</i>	
February 2015	Dissertation—Chapter 7: Comparative analysis	
March 2015	Dissertation—Chapter 8: Conclusions and Future Research Needs Dissertation—submit to Rod	
April 2015	Dissertation—revisions	

May 2015	Dissertation—revisions Dissertation—submit to committee	
June 2015	Dissertation—Committee review	
July 2015	Dissertation—Defense	
August 2015	Dissertation—final revisions	

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Appendices

Jayawickreme et al. (2012)

Table 1 *Theories of Well-Being* (336)

Theory type		Theory	Widely used measures
Wanting		-Desire-fulfillment theories -Reinforcement theories -Idealized preference theories	-Income -Behavioral measures of preference
Liking	Subjective well-being	-Positive emotions	-PANAS: Positive and Negative Affect Scale -DRM: Day Reconstruction Method -Experience sampling method
Needing	Objective	-Needs -Human development (as defined by the United Nation's Development Program's Human Development Index)	-Human Development Index
	Subjective	-Psychological well-being	-Psychological well-being scale
	Plural	-Well-being theory	-Plural measurement

Table 2 *The Engine Framework* (336)

Type	Role	Domains
Input	Exogenous resources and endogenous traits that influence well-being	-Income -Adequate nutrition -Political freedom -Education -Healthcare -Personality/strengths -Values -Talents/virtues -Needs -Capabilities
Process	Internal states that influence individual choices	-Positive affect -Cognitive evaluations -Self-control -Capabilities

Outcome	Voluntary behaviors characteristic of well-being	-Engagement/meaning -Accomplishment/contribution to the human heritage -Relationships -Goal-driven functionings
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Konu and Rimpela's Conceptual Model for Well-being in schools (2002, 83)

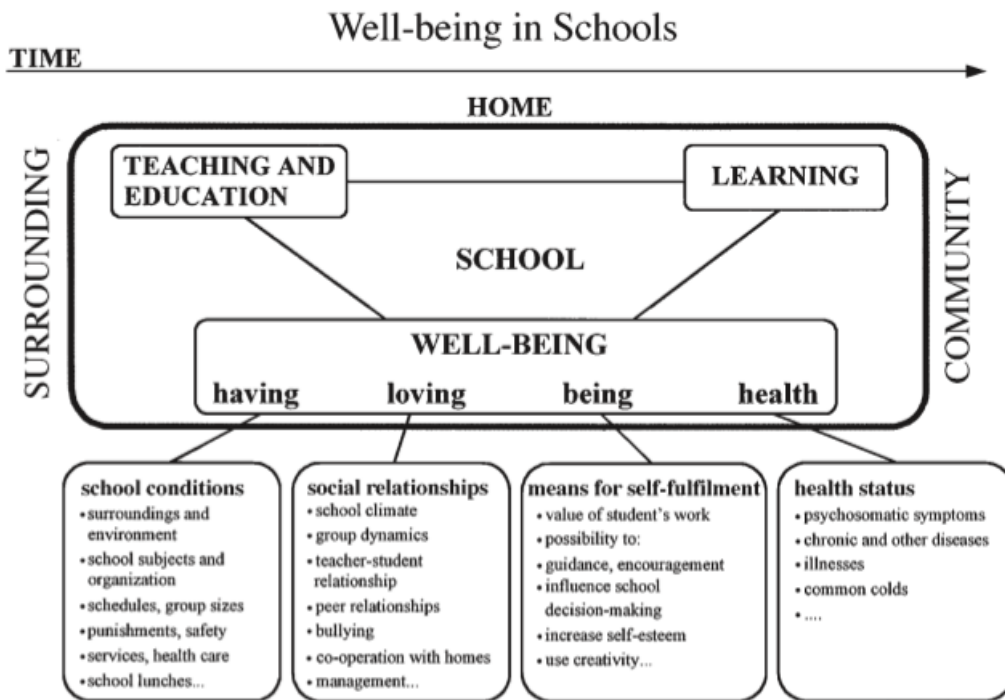


Fig. 1: The School Well-being Model.

Student Well-being Research Framework (3)

STUDENT WELL-BEING RESEARCH FRAMEWORK

Student Well-being Indicators	Level of Analysis		
	Student Measures	Classroom Measures	School Measures
Physical	<ul style="list-style-type: none"> • Physical Activity • Health Status • Safety 	<ul style="list-style-type: none"> • Organization • Size • Condition 	<ul style="list-style-type: none"> • Environment • Surroundings • Equipment
Cognitive	<ul style="list-style-type: none"> • Student Achievement • Engaged on Topics of Interest 	<ul style="list-style-type: none"> • Good Teaching • Value of Student Work • Guidance 	<ul style="list-style-type: none"> • Quality Programs • Leadership
Psycho-social	<ul style="list-style-type: none"> • Relationships (Resilience) • Self-Esteem • Emotional Regulation 	<ul style="list-style-type: none"> • Encouragement • Feedback 	<ul style="list-style-type: none"> • Climate/Culture • Relationships • Group Dynamics • Early Identification

QUESTIONS FOR KIDS, semi structured interview (suggestion, max of 10 questions)

What are your favourite foods?

Do you get to eat that at school?

Do you bring your lunch and/or snacks to school?

Do you like what your mom/dad/guardian packs in your lunch?

What is your most/least favourite thing in your lunch bag today?

Where do you eat snack?

Do you get to eat whenever you're hungry?

Where do you eat lunch?

What is that like?

What kinds of things do they give you at school?

What is your most/least favourite thing that you get at school?

What would make eating at school more fun?

SURVEYS FOR PARENTS

How many children live in your household? What are their ages? What schools do they attend?
What grades are they in? Are they (the participating child)'s full siblings? If not, explain.
How many adults live in your household? What are their relationships to the participating child?
What are the ethnic backgrounds of the parents of the participating child?
What are the educational backgrounds of the participating child's parents?
What type of employment do the parents of the participating child's parents have?
What hours do the parents work?
What is the income range of the parents of the participating child?
Is the child in some kind of before and after care program?

FOCUS GROUP QUESTIONS FOR PARENTS (NOV)

How is school food set up for your child? Do you send lunch? Is there any kind of food program set up?
What, if anything, do you know about the eating environment/where your child eats their snacks and lunches?
How much of their lunch does your child eat on a typical day?
What kinds of food does your child eat at school? Is this different from what they eat at home?
Do you find that your child is hungry after school?
Does your child say anything to you about eating at school?
Are you satisfied with the food and eating situation for your child?
Are there any areas that give you cause for concern?
Are you aware of other school food and eating situations in other schools?
What, if anything, would you change about the eating situation at school?

FOCUS GROUP QUESTIONS FOR PARENTS (MAY)

Have you been satisfied with the eating arrangement at your child's school?

Do you feel that your child is satisfied with the school's eating arrangement?

Do you feel that the school's eating environment has had an impact on your child? If so, what kind of an impact?

Do you feel that this impact has evolved over the course of the year?

What, if anything, would you change about the eating environment or the school food situation?

Are there any issues that stand out for you?

Plan B: Dissertation Research Proposal (Nov 30, 2013).

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"The true measure of a nation's standing is how well it attends to its children—their health and safety, their material security, their education and socialization, and their sense of being loved, valued, and included in the families and societies into which they are born."

UNICEF Innocenti Research Centre, 2007

1. Working Title and Area of Focus

The impact of school food and school-eating environments on the wellbeing of children transitioning from full day daycare to full day kindergarten in the Toronto District School Board.

Area of focus:

-How the presence, or absence, of school food—in the form of breakfast, snack and/or lunch programs—impacts the wellbeing of children transitioning from full day daycare to full day kindergarten

-How school eating environments impact on the wellbeing of children transitioning from full day daycare to the TDSB's full day kindergarten program

2. Nomination of Supervisor and Supervisory Committee

SUPERVISOR: Rod MacRae, Assistant Professor, Faculty of Environmental Studies

SUPERVISORY COMMITTEE

INTERNAL: Leesa Fawcett, Associate Professor, Faculty of Environmental Studies

EXTERNAL: Mustafa Koc, Professor, Sociology, Ryerson University

3. Research Problem

Overview of Research Problem

There is mounting concern for the health and wellbeing of Canadian children. One key component is diet and nutrition and, while those working in this area commonly point to the obesity epidemic, poverty and malnutrition, and the declining health of Canadian children, good food and positive eating environments contribute to a much wider array of positive outcomes such as enrollment, attendance (Galloway et al 2009), physical and psychosocial benefits (Kristjansson et al 2009) that extend throughout the course of a persons life⁷². Indeed, I hope to demonstrate that food and eating environments have a significant impact on wellbeing.

At the same time, there is some consensus that schools should play a role in teaching students to make the connection between “what we eat and how it affects wellness” (TDSB online) given that “no other public institution has as much continuous and intensive contact with young people as do schools.” (Carter and Swinburn in Winson 2012, 206) Unfortunately, as the only G8 country without a national school food policy, Canada lags behind in the area of school food programming. Indeed, Making the Grade? School Nutrition Policies Across Canada (CSPI 2007) finds that “despite some particular strengths of certain school nutrition criteria, such

⁷² See School Food in the Literature Review below for further discussion.

criteria in Canada—where they exist—comprise a patchwork quilt of often weak, inconsistent guidelines.” (13) While there have been efforts, like the Children’s Health and Nutrition Initiative (CHNI)⁷³ and the Pan-Canadian Joint Consortium for School Health, Canada has yet to institute any kind of national standards, policies or funding. Ultimately, if we hope to lobby for improved standards, policies and funding, research is required to better understand what is, and is not, working in our current system.

As it stands, there are a great number of questions to be answered. Who are school food programs for (for example targeted or universal)? What are the objectives (for example reduction in obesity, alleviating hunger due to poverty, improved student nutrition, and/or food system education)? How are programs being implemented—is food prepared on site? do students have menu options? where do the students eat? who funds the program? what kinds of checks and balances need to be in place? Each of these questions requires serious consideration and study. It would seem that that these design issues have significant impacts on the efficacy of school food programs, but research is required to support this hypothesis.

It is relatively easy to suggest that Canada should offer healthy food and food education to promote the health and wellbeing of its children, but the devil *is* in the details. At the macro level each of the provinces has its own set of evolving standards (however weak or inconsistent). Within the provinces, there are many different school boards and municipalities with multiple school boards. There are programs that may run across an entire board and projects that target specific populations or work with particular schools or even specific classes. At the micro level each student is site where multiple realities collide—culture, class, age, place—impacting needs, preferences and, consequently, participation in school food programming. Evaluating and

⁷³ In 2007 FoodShare, Breakfast for Learning, the Centre for Science in the Public Interest (CSPI) and NDP MP, Olivia Chow, launched the CHNI in an effort to develop a national policy that would provide \$1 per school child per day for healthy food in Canadian schools (CHNI, Dorrell 2007).

addressing the nutritional health and wellbeing of Canadian school children is all the more challenging because it requires the coordination and cooperation of so many actors.

As a consequence of the complexity of the issue, I have struggled with whether to attempt a broad, national level comparative study or to do a more focused, in-depth, local study and look for comparisons with available data elsewhere. For a variety of reasons, I am opting to do an in-depth assessment of the wellbeing of children in the Toronto District School Board's full day kindergarten program. Foremost among these reasons is that, as a mother of two children ages one and five, I both have a particular interest in the wellbeing of this group and I am well positioned to research this population. Additionally, younger children are especially susceptible to outside influences—like advertising and the presence of what Anthony Winson (2013) calls “pseudo foods” (Winson 2013) in schools, on the one hand, or healthy living initiatives and food system education on the other hand—which adds weight to the questions of what exactly is being imprinted in the minds of these children. Also, this group may provide an initial cohort for what I hope may ultimately become a longitudinal study. Finally, while the unevenness of school feeding programs in Canada means that any locale is ultimately unique, this city offers an unparalleled diversity of people and a wide range of school food provisioning options.

At an anecdotal level, I have already observed some distressing patterns among junior kindergarten children in the full day kindergarten program in the TDSB. For the first few months of the 2012-2013 school year many parents of boys, in particular, complained that their children were not eating *any* lunch at all at school (personal communications). Initially, what shocked me the most was that this held true for children who had been in daycare full time prior to starting school—why was it that children who had already adapted to being away from their parents or care givers during school hours and were accustomed to eating with their peers could not seem to eat with their peers at school? So I inquired about the lunchroom scenario in my son's school.

What I learned was upsetting—approximately 120 four-and-five-year-old kids are supervised by 5 lunch room monitors and expected to eat their packed lunches essentially by themselves in about 20 minutes. With one-on-one supervision and assistance, many children at that age take longer to eat a meal. The situation is bad enough that the teachers of junior students in the all-day kindergarten program were asking parents to please take their children home for lunch if possible. During these first few months, teachers commented that many of the students appeared to be ravenous during the snack program operated three days per week by the Toronto Foundation for Student Success (TFSS) and parents complained that their four-year-old children were being sent to the principal’s office for ‘misbehaving’ in the lunchroom—something some parents saw as the school punishing children for having trouble coping. At the same time, several parents have observed that the TFSS snack program does not offer the items outlined on the menu given to parents and one teacher complained about the high volume of pseudo foods, such as chocolate chip cookies and chocolate milk, cake-like pre-packaged muffins and other highly processed, high glucose items. It would seem that there is inadequate support at lunchtime, there may be inadequate checks and balances for this snack program, and there are definite consequences for the wellbeing of some students.

Detailed Literature Review and Contributions

SCHOOL FOOD

Globally there are a variety of reasons cited as motivation for school food programs, but hunger alleviation remains the most common goal and characterizes the dominant models of school feeding. Increasingly, public health concerns and the obesity epidemic are also cited, as are questions of sustainable communities and food literacy (albeit in a significantly smaller proportion). Other objectives include promoting educational outcomes, punctual attendance,

female enrollment, engaged participation and minimizing behavioural problems resulting from poor diet or inadequate food intake (Adelman et al 2007, Greenhalgh et al 2007, Kristjansson et al 2009). In a comprehensive literature review on the impact of nutrition on student performance at school, Taras explains that studies show that schools with food programs and breakfast programs, in particular, have lower rates of tardiness, better attendance rates and there appears to be a positive impact on cognitive skills in the short term (2005, 213)⁷⁴⁷⁵. The literature on school feeding in the developing world also supports the finding that school food programs are associated with a range of positive outcomes such as enrollment and attendance (Galloway et al 2009), and physical and psychosocial benefits (especially for disadvantaged students) (Kristjansson et al 2009).

The impacts of school feeding programs are typically assessed in three categories: cognitive and educational benefits, health related benefits, and behavior and psychosocial benefits (Brown et al 2008). The impacts of breakfast, in general, on cognition are definitive—children perform some cognitive tasks, such as working memory, more successfully if they have had breakfast than if they have not (Pollitt and Matthews 1998, 804S). The impacts of school breakfast programs on cognition are clear when the study looks at children from low-income families—school breakfast programs are associated with “significant improvements in academic functioning among low-income elementary school children.” (Meyers et al 1989, 1234 and Peterson et al 2003, 42, Brown et al 2008, 8) However, once more variables are introduced—snack and lunch programs for students from varying backgrounds—the data becomes much more nuanced and, frequently, results are statistically insignificant. Nonetheless, it is known that “even moderate undernutrition can have a lasting effect on children’s cognitive development and

⁷⁴ Taras also cites positive results in the areas of iodine insufficiency, iron deficiency (2005, 206).

⁷⁵ Similarly, Behrman (1996), an economist who is critical of the way that many studies on health and nutrition impact education tend to conflate association with causality, nonetheless finds that “improving the health and nutrition of poor children can be an efficient way to improve school attendance and enhance economic growth.” (33)

school performance” (Winicki and Jemison 2003, 145), these more nuanced results reflect challenges in school food program design and, in some cases, research challenges controlling for certain variables, for example innately smart or innately healthy children (Behrman 1996, 26). Thus, while there remain questions about the design of school feeding programs—for example, which meal and whether or not to employ a targeted approach—there is no doubt that good nutrition is positively associated with cognitive abilities. Similarly, good nutrition is positively associated with health, but the impact of school feeding programs on health is more complex and depends, to a large extent, on program design. By contrast, the psychosocial impacts of school food programs are definitive. Greenhalgh et al (2007) note, “Qualitative process data suggested that a meal at school can be a social event that engages, motivates, and stimulates the students.” (859) Also, Brown et al (2008) cite six studies that find improvements in psychosocial functioning, including a study by the United States’ Centre for Disease Control and Prevention that found strong evidence that school feeding programs “decrease rates of violence and aggressive behavior among school-aged children.” (11)

In Canada we have never implemented a national school food policy, we lack specific national standards for school food⁷⁶ and school food funding regimes and, consequently, the provision of school food is fragmented, piecemeal, underfunded and uneven (Henry et al 2003, Russel 2004, 34, CSPI 2007, 13). Much of the peer reviewed literature on existing school food programs in Canada is overwhelmingly negative and primarily addresses stigmatization of both student participants and parents, reproduction of inequalities, and lack of evidence of benefit for child nutrition in targeted hunger alleviation school food programs (McIntyre & Dayle 1992; Raine et al 2003; Hay 2000; McIntyre et al 1999; Williams et al 2003). Williams et al (2003), Raine et al (2003) and McIntyre et al (1999) find that the majority of students using existing

⁷⁶ In Canada, school food standards are set sub-nationally, at the provincial level.

school food programs are “not poor and attended for other reasons, such as convenience and socializing.” (Williams et al 2003, 165) While these authors are critical of this, studies in the United States and elsewhere have found that the social benefits to school feeding are vast and contribute to a range of positive outcomes (Greenhalgh et al 2007). In fact, citing no less than 5 studies, Russell (2004) explains that school food programs enhance the school atmosphere and improve classroom behaviour (30)—factors which, through complex chains of relationships, lead to a range of beneficial educational and health outcomes.

WELLBEING

Early in my doctoral work I found myself drawn to the research emerging from positive psychology’s new field of ‘happiness studies.’ With a Master’s degree in International Development Studies (Dalhousie 2005), I, like many others, had grown wary of the traditional measures of development such as Gross Domestic Product (GDP) and Gross National Product (GNP). In response to widespread dissatisfaction with existing tools, new measures emerged. For example, in the field of development, the United Nations’ Development Program (UNDP) began putting together the Human Development Index (HDI) in 1990. Drawing on Nobel laureate, Amartya Sen’s, work on the capabilities approach (CA), the HDI offers a comparative measure of health, education and living standards as a means of evaluating development (<http://hdr.undp.org/en/statistics/hdi/>). Later, drawing on the system of Gross National Happiness (GNH) developed in the tiny nation of Bhutan, a community of researchers developed the Genuine Progress Index (GPI) incorporating a wide range of measures (<http://www.gpiatlantic.org/gpi.htm>). Yet, after more than a decade of frequent travel to Cuba for employment and research, I still felt that these more robust measures were missing essential elements about lived experience, something about life satisfaction not present in the HDI or

GPI⁷⁷. Happiness studies addresses this shortfall in-so-far-as it is dedicated to the scientific study of subjective wellbeing (Journal of Happiness Studies homepage) though, insofar as it gives weight to subjective feelings over the experience of objective reality, it is not entirely well suited to my research.⁷⁸

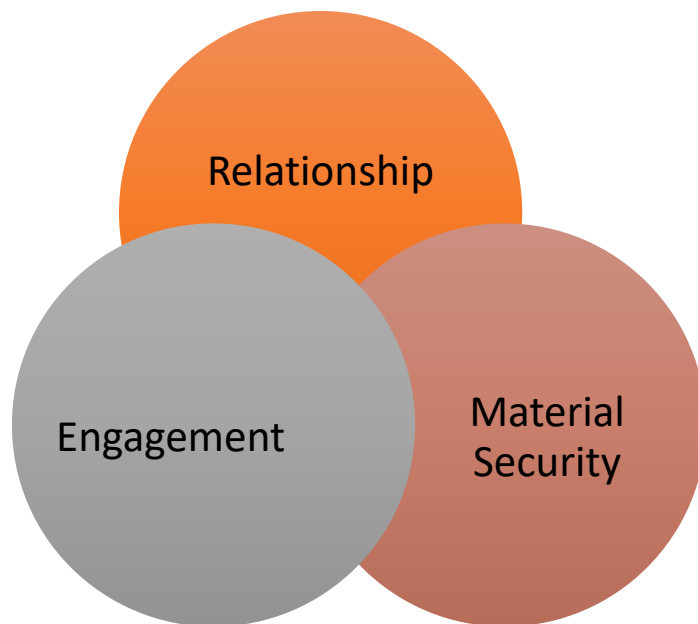
Consequently, as part of my work on my first comprehensive (2007-08) and drawing on my background in evaluating public policy in International Development and research in the nascent field of Happiness Studies, I began to develop my own model for wellbeing (WB). At the time, two sets of terms dominated the field. Diener and Seligman (2004) found that WB includes: 1) positive emotions and moods or The Pleasant Life; 2) engagement or The Good Life, and; 3) having meaning in life or The Meaningful life (4, 21). Ruut Veenhoven (2000), professor emeritus of social conditions for human happiness at Erasmus University Rotterdam in the Netherlands, described WB as an umbrella term addressing three main areas: 1) favorable living conditions; 2) relevant competencies,⁷⁹ and; 3) the balance of outcomes of life⁸⁰ (94-95). In both cases the usual demographic variables measured for WB include age, income, employment, marital status and education levels (Graham and Pettinato, 2000, 240). Drawing on these early definitions, I developed a model for WB that includes three main components—material security, relationship and engagement—with meaning at the core (Bas 2008).

⁷⁷ This missing element did seem to be present in Bhutan's GNH, but the model did not seem to easily translate to other contexts.

⁷⁸ I am more interested in eudemonic notions of the flourishing of human potential than hedonistic notions of life satisfaction. Much of the work in happiness studies tends towards the latter, though the distinctions are becoming clearer since the early days of happiness studies.

⁷⁹ This reflects some of what Sen covers with his Capabilities Approach (CA).

⁸⁰ Veenhoven (2000) notes analogous concepts in biology—biotype, adaptation, and survival—and in systems theory—input, throughput, and output (94).



Over the course of the last decade, there has been a proliferation of research in the fields of positive psychology, happiness studies and wellbeing—so much so that there is now an emerging literature that aims to clarify the increasingly blurry and broad definitions of wellbeing (Hascher 2008, Crivello et al 2009 Gasper 2010, Forgeard et al 2011, Jayawickreme et al 2012). Most recently, three of the most prominent researchers in the field, Jayawickreme, Forgeard and Seligman (2012), came together to review the field and propose a model for future research, their “Engine for Well-being.” Jayawickreme et al (2012) find that there are three main categories of wellbeing theories—*liking* approaches favoured by psychologists, *wanting* approaches employed by economists and *needing* approaches relied on in public policy and psychology. Drawing on Sen’s work on the capabilities approach (1999) and Seligman’s later work on flourishing (2011), these authors propose an integrative framework that delineates *inputs* that enable wellbeing (like education, health, and good nutrition), *processes* (internal states that influence wellbeing), and *outcomes* that reflect the attainment of wellbeing. With respect to public policy, Jayawickreme et

al (2012) argue that a “well-being index that is useful to public policy needs to be more transparent, to integrate subjective and objective measures into superordinate variables, and to separate measures of input from measures of process from measures of outcomes.” (337)

Understood through the lens of this ‘engine,’ my model for WB, in line with both Sen’s work and Seligman’s more recent work,⁸¹ is a needing-eudemonic⁸² theory of wellbeing that evaluates the efficacy of inputs based on outcomes.

EVALUATING SCHOOL FOOD FOR WELLBEING

The explosion in the popularity of research on wellbeing has brought with it a multitude of tools for measuring it. There are subjective metrics of wellbeing that measure happiness, affect, life satisfaction, engagement, meaning, relationships and competence using techniques like the Day Reconstruction Method and the Experience Sampling Method to assess anywhere from 7 to 100 dimensions. Though this work on life satisfaction, positive and negative affect falls outside my research area, my non-exhaustive review of recent work on Subjective Well Being SWB (i.e. in the last 10-15 years) revealed no less than 18 such tools. Similarly, the area of psychological theories of wellbeing (PWB) has produced personal growth models, life-span development perspectives and positive mental health models, each with a range of evolving tools. With respect to my research, a great number of Objective Well Being (OWB) measures or *needing* accounts have emerged. While Forgeard et al (2011) only specifically point to two tools—the United States General Accounting Office’s (GAO) list of Key National Indicators (KNI) and the United Nations’ Development Program’s Human Development Index (HDI)—

⁸¹ In his book, *Flourish* (2011), Seligman redefines the endpoint of his theory as “well-being” rather than “happiness.” Here he explains that wellbeing consists of pursuing and attaining one or more of these key things: positive emotion, engagement, relationships, meaning and accomplishment.

⁸² Jayawickreme et al (2012) delineate between ‘hedonic’ measures, like subjective wellbeing (SWB) that evaluate positive and negative affect as well as cognitive measures of life satisfaction and ‘eudemonic’ measures that “assess the extent to which individuals are ‘doing well’ (rather than merely ‘feeling good’) by looking at constructs such as meaning, purpose, engagement, and flow, among others.” (328)

Alkire (2002) identifies 39 attempts to define a ‘good’ or ‘flourishing’ life, at varying levels of analysis, and I have encountered countless tools, the Canadian Index of Wellbeing (CIW) among them. None of these tools, however, effectively lends itself to an assessment of school food or school eating environments for wellbeing.

There is, of course, another set of literature on wellbeing directed specifically at children. This literature has its own set of challenges. Pollard and Lee’s (2003) “Child Well-Being: A systematic review of the literature” finds that “inconsistent use of definitions, indicators, and measures of well-being has created a confusing and contradictory research base” (69), there is “no standard method to assess well-being in children” (68) and that there are literally “too many instruments to count” (68). Against this backdrop, there are relatively few models designed specifically to assess wellbeing in school or student wellbeing and, when the dimension of food is added, there are even fewer.

From this vast array of measures, models, instruments and tools only two are relevant to my study, though neither addresses school food in a meaningful way. The first model, a conceptual model for wellbeing in schools, was developed in 2002 by two Finish scholars, Konu and Rimpela⁸³. Drawing on Allardt’s sociological theory of welfare, Konu and Rimpela argue that wellbeing is a state in which it is possible for a person to meet their material and non-material needs. Allardt divides these needs into three categories, *having*, *loving*, and *being* which Konu and Rimpela adapt to the school context as “school conditions,” “social relationships,” and “means for self-fulfilment,” respectively. They add a fourth dimension, “health.” Each dimension is broken down into four-to-seven sub-areas, “school lunches” being one of 22 areas to be considered (see appendix). The second relevant model is a “Student Well-being Research Framework” developed by Ontario Ministry of Education in 2011 as a response to the December

⁸³ Hascher (2008) describes this as the only instrument that exists for assessing wellbeing in school (85).

15, 2009 Bill 177 that provides that “boards shall promote student achievement and well-being.” The framework presented here offers three dimensions of student wellbeing—*physical*, *cognitive*, and *psycho-social*—across three levels of analysis—student measures, classroom measures, and school measures. Across the nine areas, this model offers 25 sub-areas, none of which include school food (see appendix). Nonetheless, this model’s dimensions—*physical*, *cognitive*, and *psychosocial*—align very well with my model for WB’s dimensions of material security, engagement and relationship, respectively. This model’s dimensions also align with the assessment categories for school food—health related benefits, cognitive and educational benefits, and behavior and psychosocial benefits, respectively. Thus, as I adapt my model for WB I will draw on this conceptual model for student wellbeing for some of the sub-areas and research questions and on the student wellbeing research framework for broad structure.

My model for wellbeing	Assessment categories for school food	Conceptual model for wellbeing in schools	Student Well-being Research Framework
Material security	Health related benefits	School conditions & health	Physical
Engagement	Cognitive and educational benefits	Means for self-fulfillment	Cognitive
Relationship	Behaviour and psychosocial benefits	Social relationships	Psychosocial

GAPS IN THE LITERATURE

Significant portions of the literature on school feeding deal primarily or exclusively with the third world (Taras 2005, Behrman 1996, Levinger 1992, Kristjansson et al 2009, Galloway et al 2009, Adleman et al 2007, Aldinger & Jones 1998, Bundy et al 2009) and there is also a great deal of literature on the US (Russell 2004, Peterson et al 2003, McLaughlin et al 2002, Todhunter 1970, Meyers et al 1989, Finkelstein et al 2008, Allen and Guthman 2006, Bagdonis et al 2009, Graham et al 2004, Joshi et al 2008, Ozer et al 2007), but there is comparatively little literature on school food in Canada. Much of the literature on school food in Canada is heavily

focused on school food as an ineffective targeted hunger alleviation strategy (McIntyre & Dayle 1992; Raine et al 2003; Hay 2000; McIntyre et al 1999; Dayle & McIntyre 2003; Williams et al 2003). Beyond this literature, there are a good number of provincial handbooks on establishing student nutrition programs and reports by charitable organizations that help to fund school food programs, like Canadian Living's Breakfast for Learning or Evergreen. One notable exception is the ongoing Think&EatGreen@School project in Vancouver, headed up by Alejandro Rojas. Given that we lack national standards, what standards we do have are at the provincial level and school feeding in Canada is typically pieced together through complex, mixed funding sources, relying heavily on non-governmental funders, the landscape of the literature is not all that surprising. Nonetheless, a systematic assessment of the efficacy of various school feeding models is needed, especially if we hope to establish national standards. While my research project will by no means provide an exhaustive review of school feeding models in Canada, my work will address this gap in the literature. Additionally, because the full-day kindergarten program in the TDSB is quite new, it is important to inquire as to how this new program is impacting children.

Similarly, while there is a rapidly growing body of literature on wellbeing, there are important gaps. The literature on wellbeing delineates between hedonic and eudaimonic wellbeing approaches, offers models that measure subjective wellbeing (SWB), psychological wellbeing (PWB) or objective wellbeing (OWB) and, more often than not, relies on survey data from questionnaires, or the use of various experience sampling methods of quantitative data collection. There is a subset of this literature that deals with children, but this literature: 1) rarely addresses children as students; 2) when the school setting is considered, school food is given marginal importance, at best, and; 3) has never directly addressed the wellbeing of young

children in the school setting⁸⁴. My research will address these three gaps in the wellbeing literature.

Key Research Questions

- 1) What are the differences between children's experiences of eating at full-day daycare and children's experiences of eating at full-day kindergarten.
- 2) How do school eating environments impact the wellbeing of children in the full-day kindergarten program?
- 3) How does the presence of a school food program impact the wellbeing of children in the full-day kindergarten program? And, does the design of that program affect the wellbeing impacts?

4. Conceptual/Theoretical Framework

SCHOOL FOOD

School food refers to foods consumed either at school or during the school day. This includes packed lunches and snacks, breakfast, lunch and snack programs, and the food consumed by students who leave the school premises during the school day either to eat at home or elsewhere.

SCHOOL FEEDING PROGRAM

A school feeding program is any program that offers school food as part of a school program.

SCHOOL-EATING ENVIRONMENT

⁸⁴ Pollard and Lee (2003) find that most indicators of child wellbeing are designed for older children (65).

The concept of the school-eating environment (SEE) is both concrete and abstract. In concrete terms, the SEE refers to the material conditions available for the provision and consumption of school food. Material environments can have a great impact on food consumption. Are students eating in classrooms, lunchrooms, cafeterias or hallways? What kind of supervision is there? Are the spaces enjoyable and relaxed? Noisy? Overcrowded? Last school year my, then, four-and-a-half-year-old son described eating lunch in a crowded lunchroom, “so loud I can’t hear,” with lunchroom monitors the children see at no other time during the day. By contrast, the same students eat snack provided through the Toronto Foundation for Student Success in their classroom with their teacher, their early childhood educator (ECE), and parent volunteers with relative ease. Parents and teachers alike attest to the fact that these different material environments have a significant impact on how and what the children eat. Indeed, there is a body of literature that specifically addresses the importance of the meal environment for children (Woodruff and Hanning 2009, Spurrier et al 2008, Stroebele and de Castro 2004), the impact of school food environments on children’s dietary habits (Briefel et al 2009) and the relationship between parental influence, home meal environments, school meal environments and children’s eating habits (Ishdorj et al 2013, Krolner et al 2009, Boutelle et al 2003). The material SEE is an essential dimension in assessing the wellbeing impacts of school food for children in the TDSBs full day kindergarten program.

The school-eating environment also connotes the broader social and political environment surrounding school food. At the most immediate level, SEE addresses the psychosocial element of wellbeing—the students’ relationships with peers, adults and food while consuming food at school. Beyond this are the relationships among the administrators, staff/feeding supervisors and food providers at the school. The parents’ relationships with all of these actors are another important level—most children eat all, or nearly all, of their meals either

with their parents or caregivers or at school—parents’ and caregivers’ attitudes (inward and outward) about food, in general, and school food, in particular, have a profound impact on the eating habits of young children. Finally, there is the broader political context of school feeding—the trustees, the school boards, municipal and provincial governments, and, in some cases, outside actors like organizations running farm-to-school programs like salad bars, cafeteria options, garden programs and the like. Each of these relationships influences the SEE and, therefore, effects the wellbeing impacts of school food.

WELLBEING

As noted above, wellbeing is both an increasingly popular area of research and (perhaps consequently?) an increasingly blurry and difficult concept to define. For the purposes of my work, I will draw on my model for WB which proposes three main dimensions—material security, relationship and engagement—viewed as a Venn diagram with meaning at the core (see above). In line with the work of Nobel-laureate, economist and development philosopher, Amartya Sen, this model provides a framework that promotes the expansion of opportunities for people to “live the kind of lives that people have reason to value” (1999, 295). Having drawn on the early work of one of the leading researchers in the field of positive psychology, Martin Seligman, my 2008 model bears great resemblance to his more recent five elements of wellbeing—positive emotion, engagement, meaning, positive relationships and accomplishment (2011)—with the exception that, as a psychologist, he includes consideration of affect whereas I, with a background in development theory, find that it is essential to consider material conditions. Through the course of my dissertation work, I expect that my model will become more robust.

Note:

- There is a lot of literature that talks about things like “promoting student health and wellbeing” that does not seem to be specifically assessing wellbeing (eg Saad 2009), therefore

there is a need to delineate between WB as a framework for assessment and the ‘casual’ use of the word wellbeing in other kinds of toolkits.

- Also, while there is a great deal of overlap between wellbeing and wellness, these are two distinct concepts. Wellbeing, as I have outlined above, is a relatively new concept whereas the wellness movement began shortly after the Second World War (Miller et al 2010, 5). The two concepts are closely interrelated because both are holistic and each one contains the other: most concepts of wellbeing include good health as a precondition and Miller et al (2010) explain, “the dominant view of wellness is that it is holistic and that an absence of illness and a state of wellbeing are both essential.” (6) The underlying difference, as I see it, is that WB gives primacy to the psychological experience whereas wellness leans towards the physiological experience. That said, proponents of either concept would argue that psychological and physiological experiences are deeply intertwined and cannot be considered in isolation. I prefer the concept of WB because it also includes consideration of broader social phenomena.

STUDENT WELLBEING

Student wellbeing refers to both the wellbeing of students while they are at school and the wellbeing of the student as it relates to school. For example, studies of the impacts of Farm-to-School find that benefits of changed eating habits extend to the children’s home lives (Joshi et al 2008, 233) and studies on the importance of meal environments find that there is a great deal of interaction between home and school environments (Ishdorj et al 2013 and Krolner et al 2009). Thus, student wellbeing refers to any and all elements of the children’s present wellbeing that relate to the school, school food and the school-eating environment. For the purposes of this study, I will limit my evaluation of the dimensions of wellbeing to readily observable components due to the simple fact that I am one graduate student working alone on this study.

5. Research Methodology, Design and Methods

Methodology

My goal in this research project is to assess how school food and the school-eating environment impact on the wellbeing of children in the TDSB's full day kindergarten program. More specifically, I am interested in why some children who are well adjusted to eating with their peers in full day daycare have such difficulty eating with their peers when they transition to full day kindergarten. While there is some concern regarding the validity of children's self-reporting (Ben-Arieh 2005, 581 cites Bianchi and Robinson 1997, Plewis et al 1990 and Medrich et al 1982), there is a growing movement to include children in research on the wellbeing of children (Crivello et al 2009, Ben-Arieh 2005, Hascher 2008, Prilleltensky 2010). Because I believe strongly in children's agency, my research methods draw on both Trudge and Hogan's (2005) ecological approach to naturalistic observations and Hill, Laybourn and Borland's (1996) somewhat participatory approach to interview and focus group research with children ages 5 to 12.

Until very recently, most of the research on children's lives has treated children as "passive objects that are acted upon by the adult world" (Ben-Arieh 2005, 577) and has excluded children from research involving them and their wellbeing (Crivello et al 2009, 57 cite nine sources to this effect). Similarly, Greene and Hill (2005) note that historically, social scientific, empirical research on and with children "has been on children as the objects of research rather than children as subjects, on child-related outcomes rather than child-related processes and on child variables rather than children as persons." (1) By contrast, child-focused research "affirms children as competent social actors, the 'experts in their own lives', and therefore valid sources of data." (Crivello et al 2009, 52) If we accept children as agents in their own lives, the reliability

question remains. In response to this, Ben-Arieh (2005) cites research that shows that “studies directly involving children have yielded just as good response rates and reliability (and sometimes even better) as studies using adults to report on children’s well-being.” (579-580) Indeed, in an article on child wellness and social inclusion, Prilleltensky (2010) argues, “children can have powerful voices, but they will remain unheard until spaces for their expression are created and nurtured.” (247) The task, then, for researchers is to commit to a participatory methodology and develop methods that facilitate genuine child participation.

The most promising approach for research with young children that I have encountered thus far is the Mosaic approach, an approach to participatory research with pre-school aged children (Clark and Moss 2001). Three theoretical perspectives underlie it. First, children are seen as “social actors who are ‘beings *not* becomings’ (Qvortrup⁸⁵ et al 1992, 2)” thereby placing emphasis on exploring children’s perceptions of their lives, their interests, priorities and concerns (Clark 2005, 12). The second key theoretical concept is the concept of voice that emerged from Participatory Appraisal techniques in the field of international development. These techniques include both visual and verbal tools devised initially to make the voices of the least powerful adult members of a community heard. The third theoretical perspective hinges on the notion of the competent child, the pedagogy of listening and the pedagogy of relationships. The authors of the mosaic approach were inspired by the municipal preschools of Reggio Emilia and the notion of a “rich active child” (12).

One of the key cornerstones of practice in Reggio Emilia is the pedagogy of listening described by Rinaldi (2005) (in Clark 2005, 16). This approach identifies three key elements: internal listening or self-reflection, multiple listening or openness to other voices and visible

⁸⁵ Work that recognizes children as ‘beings’ rather than ‘becomings’ is typically traced to the work of Jean Qvortup, a founding father of childhood studies and the new sociology of childhood.

listening, which includes documentation and interpretation. Briefly, internal listening is about the reflective process and finding ways to help children find meaning in what they do. In the research context, the multi-method framework, employing a variety of methods each of which may work for children with differing learning styles, offers students an opportunity to look at the same question in a variety of ways, enabling participants the opportunity to meaningfully engage (17). For example, Clark describes a four-year-old child participant with limited verbal skills who was able to communicate more easily with drawings and pictures (19). Multiple listening acknowledges the validity and importance of multiple perspectives, including practitioners who work with the child participants (20), whereas visible listening addresses the way that having children engage as co-documenters allows them to take control of the meaning-making within the analysis (23-24). The mosaic approach seems ideally suited to evaluating the wellbeing impacts of school food and the school-feeding environment on children in the TDSBs full day kindergarten program.

Methods

In their article, “Engaging with Primary-aged Children about their Emotions and Well-being: Methodological Considerations,” Hill, Laybourn and Borland (1996) note that, due to the very real constraints of the structure of academic research, it is unlikely that researchers will have the opportunity to engage children in research design process and, consequently, research with young children cannot be truly participatory. Nonetheless, the authors go on to explain that the “task for participatory research then becomes one of finding ways of blending and reconciling previously identified themes and questions, with opportunities for children to contribute their own concerns.” (131) Consequently, I will employ a mixed-methods approach including: naturalistic observations of child participants in their respective daycare settings and

the mosaic approach at the school setting; surveys, lunch-tracking and focus groups with parents and care givers; semi-structured interviews with key informants.

CHILD PARTICIPANTS— NATURALISTIC OBSERVATIONS AND THE MOSAIC APPROACH

My fieldwork will begin with a six-week period of naturalistic observations of child participants in the daycare setting during the spring of 2014. The observational model I am using draws on the model Tudge and Hogan (2005) outline in their chapter, “An Ecological Approach to Observations of Children’s Everyday Lives,” as a model appropriate for children ages 2 to 4 years old. These authors draw on ecological theories to integrate psychological and sociological perspectives (102) to generate a relational method that pays “attention to how children behave *in relation to others and their environment*” (103). During the first two weeks I will spend three days at each site becoming familiar with the daycare routines and allowing the children to become familiar with my presence. For the following three weeks I will visit each daycare for one full day each week during what will later be regular school hours, 9:00 am to 3:20 pm. During each of these visits I will focus my observations on three children, using 10-minute intervals. The non-site days will be used to organize my field notes as I go. Finally, during the final week, I will visit each site and will ask the children to draw a map or picture of themselves in the place where they eat at daycare.

The school component of my research, during the fall, will follow the mosaic approach’s three stage model: 1) gathering perspectives; 2) discussing the material; and 3) deciding on areas of continuity and change (Clark 2005, 15). In the first stage, I had hoped that child participants could take me on a tour of their school-eating environment(s)—lunchroom, spaces for snack, drinks, where the food is kept and/or prepared—unfortunately, thus far, the TDSB has declined to grant me access. Whether I am able to gain access to the school setting or not, as in the mosaic

approach, the students will have an opportunity to draw pictures of their school-eating environments; the students will then use their drawings to map out their school-eating environment(s) (13). The second stage offers an opportunity to dialogue with the children about their images and maps. Clark notes that while “reflecting on meanings and reassessing understandings is implicit throughout the whole approach, ... the second stage allows a concentrated period of reflection.” (15) Finally, in the third stage, the child participants will have the opportunity to come together with other child participants, share their maps and discuss together ideas that they think would improve their school-eating environments. It is important that the first two stages in this phase of the research project are one-on-one while the final stage occurs in a focus group setting to allow for the varying communication styles of child participants.⁸⁶

PARENTS AND CAREGIVERS—SURVEYS, PHOTO-FOOD DIARIES, AND FOCUS GROUPS

While parents and caregivers are removed from both the daycare setting and the school-eating environment, they likely know their children better than anyone else. I will survey parent participants about their household information—family structure, parental work/home schedules, family income range, education level of parents, ethno-cultural background, whether there are any forbidden foods, etc. During the summer, in between the two major research phases, I will maintain some contact with the parents and care givers of child participants because if some of the participants are not in full day programming during the summer, it may impact the research results, and in order to maintain some connection to the young participants. In the fall, once the children have started full day kindergarten, I will ask the parents or caregivers to photo-document the contents of their child’s lunch bag both before and after school for a week. This, in

⁸⁶ For further discussion, see Hill, Laybourn and Borland 1996, pp. 133-134.

conjunction with information from key actors regarding the content of snack programs and/or lunch programs, will offer insight into the consumption habits of child participants. Finally, following the completion of the child participant components, I will put together a focus group with parents and caregivers from each school to discuss the strengths and weaknesses of school food and the school-eating environment, as they understand it.

RECRUITMENT

I aim to conduct my study at three daycares that ‘feed into’ two schools with full day kindergarten in the TDSB. I have identified two daycares that feed into two schools that are similar in terms of TDSB Learning Opportunity Index (LOI) ranking, have similar average parental incomes, and similar ratings on the Fraser Institute’s “Compare School Rankings” index. Both schools have average parental incomes just above the poverty line (approximately \$4000 above the poverty line for a family of four). The major difference between these two schools is that one of the schools offers a partially funded snack program three days a week (a program which some TDSB schoolteachers have said is loaded with pseudo foods) and the other offers a pay-as-you go hot lunch program, has partnered with FoodShare’s Field-to-Table Schools program for the past three years and has an ongoing garden program in their rooftop garden. The third daycare/school combination has average parental incomes more than double the poverty line and offers no school food programming. Once I have obtained consent from the daycare centres, I will begin to contact parents and caregivers of age-appropriate potential child participants. I aim to engage 9 child participants at each of the three daycare centres.

Analysis

Broadly, I will analyze my data using Miles, Huberman and Saldaña’s (2013) six classic analytic moves (10) and three concurrent flows of activity (12-14), influenced by Marshall’s

“Making sense as a personal process” (1981) and “Living life as inquiry” (1999). Miles, Huberman and Saldaña’s classic, sequential analytic moves are:

- Assigning codes or themes to a set of field notes, interview transcripts or documents
- Sorting and sifting through these coded materials to identify similar phrases, relationships between variables, patterns, themes, categories, distinct differences between subgroups and common sequences
- Isolating these patterns and processes, and commonalities and differences, and taking them out to the field in the next wave of data collection
- Noting reflections or other remarks in jottings, journals, and analytic memos
- Gradually elaborating a small set of assertions, propositions, and generalizations that cover the consistencies discerned in the database
- Comparing those generalizations with a formalized body of knowledge in the form of constructs or theories. (1)

Obviously, I will first need to interpret and code the children’s drawings, maps and photographs.

Miles, Huberman and Saldaña (2013) describe analysis as three concurrent flows of activity: data condensation, data display, and conclusion drawing and verification (12). They argue that data condensation makes the data stronger by focusing, sorting and organizing it such that ‘final’ conclusions can be drawn and verified (12). Given that I aim to include outlying, confirming and disconfirming data, I will need to use extreme caution in this step, especially because I will be interpreting visual data. For this reason, I hope to consult with child participants in child conferences (Clark and Moss 2001, 15) as I interpret the pictures and maps they generate.

“Generically,” explain Miles, Huberman and Saldaña, “a *display* is an organized, compressed assembly of information that allows conclusion drawing and action.” (12-13) Given

the high volume of data, good displays (matrices, graphs, charts and/or networks) are essential. Miles, Huberman and Saldaña note that large amounts of text tend to “overload our information-processing capabilities and preys on our tendencies to find simplifying patterns” (13) and both they and Marshall (1981) note that this can lead to giving excessive weight to the ‘loudest’ voices (Miles, Huberman and Saldaña 2013, 13 and Marshall 1981, 396). Generating displays will facilitate a more systematic interpretation of my data [though, at this point, I feel like I will need the wall of a gym to post my data display/s].

The third stream of analytic activity in Miles, Huberman and Saldaña’s account is conclusion drawing and verification. Both these authors and Marshall advocate holding early conclusions “lightly, maintaining openness and skepticism” (2013, 13) and allowing arising ideas to develop with loose connections (1999, 4), respectively. Marshall (1981) explains that throughout the iterative process of research and analysis “categories build up” and “chunks of meaning” emerge (397). At the same time, these conclusions must be verified in a similar fashion and Reason and Rowan (1981) stress the importance of sifting through findings “over and over again” (248). Miles, Huberman and Saldaña propose review of original field notes and review among colleagues to develop intersubjective consensus (13). As I aim to conduct my research in a participatory fashion, I will add review with child participants to this list as in Reason and Rowan (1981, 248) and Clark and Moss (2001, 15).

More specifically, I will assess coded data based on the framework outlined above—material security, engagement and relationship—drawing on the Search Institute’s “40 Developmental Assets for Early Childhood (ages 3-5)” to help identify key areas.⁸⁷ The following table shows components of the three dimensions of wellbeing to be evaluated.

⁸⁷ In my use of “40 Developmental Assets for Early Childhood (ages 3-5)” I will be cautious, as this measure is developmental and, consequently, evaluates based on the notion of children as ‘becomings’ rather than emphasizing their ‘being’. [It is the TDSB’s critique that has me thinking that I need to incorporate this type of evaluation tool. Am I wrong? Is this unnecessary?]

Dimension of Wellbeing	Component evaluated
Material security	-household income range based on parent survey -food consumed at daycare and at school
Engagement	-level of engaged participation observed at daycare site -level of engaged participation as reported by teacher and self-reporting
Relationship	-observed at daycare site -self and teacher reported at school

Validity and Reliability of Data

In their chapter on “Issues of Validity in New Paradigm Research”, Reason and Rowan (1981) argue that by developing the notion of perspective we can get away from notions of objectivity and subjectivity (241) and that we have to learn to think dialectically, to view reality as a process, always emerging through a self-contradictory development, always becoming; reality is neither subject nor object, it is both wholly independent of me and wholly dependent on me. This means that any notion of validity must concern itself both with the knower and with what is to be known: valid knowledge is a matter of *relationship*. (241)

Also, citing Maruyama (1978), they argue for moving beyond the notion of one truth explaining that knowledge within a heterogenistic epistemology is:

Polyocular: binocular vision enables us to see three-dimensionally, because the *differential* between two images enables the brain to compute the invisible dimension. Cross-subjective analysis enriches our understanding. (242)

In line with this thinking, I intend to move towards intersubjectively valid knowledge, that is, an interpretation that is “right for a group of people who share a similar world” (243). In my pursuit of that goal, I will take the following measures:

- Offer *thick* descriptions. Marcel (2001) explains, “thick constructivists contextualize human behavior in an effort to understand it.” (4) She offers the example of two boys rapidly contracting their right eyelids—one due to an involuntary twitch and the second, winking conspiratorially. She introduces two more boys, also contracting their right eyelids—the third parodying the second boy and the fourth rehearsing a parody of the second boy. Whereas a *thin* description would note that there were four winking boys, a *thick* description would consider the *meaning* of these acts and describe “twitching”, “winking conspiratorially”, “parodying” and “rehearsing” (4-5).
- Engage in multiple *cycles or stages* of research. Reason and Rowan (1981) argue that “one of the most characteristic things about good research at the non-alienating end of the spectrum is that it goes back to the subjects with the tentative results, and refines them in the light of the subjects’ reactions.” (248) Given the young age of my research participants and the high degree of interpretation required for draw-and-tell components, this cycling and re-cycling “over and over... and over and over again” (248) will be particularly important in order to unearth participants’ intended meanings.
- Seek out colleagues, peers and mentors to *challenge* my interpretations. Again, due to the high degree of interpretation, “people who will offer support and people who will challenge and confront” will offer an invaluable safety (Reason and Rowan 1981, 247).
- *Exclude nothing* from the analysis. Treat nothing as an outlier and look for both confirming and disconfirming data in my project.
- *Expose my biases*. I am a proponent of healthy school food initiatives that offer farm-to-school food as part of an experiential education program. I will be clear about this preference, lest it effect my interpretation of the data.

- *Be cautious of early impressions.* The voices that are the loudest, whether happy or unhappy, are often over-represented in initial impressions (Marshall 1981, 396). I will aim to set these impressions aside and base my interpretations instead on my *cycles* of research with participants.

6. Tentative Outline of Dissertation

Research plan

Time frame	Type of participant	Research component
January 2014	Key actors	Semi-structured interviews
March 2014	Parents/care givers	Surveys
April-May 2014	Children	Naturalistic observations in the daycare setting
June-August 2014	Parents/care givers	Maintain contact in case of major scheduling changes for children (e.g. vacations, camps etc.)
September 2014	Parents/care givers	Photo food diaries
October-November 2014	Children	Mosaic approach
December 2014	Parents/care givers	Focus groups

Dissertation chapter headings

Chapter 1: intro & theoretical framework

Chapter 2: lit review

Chapter 3: methodology & methods

Chapter 4: Case 1—a low-income daycare/school combination where the school offers limited school food programming

Chapter 5: Case 2—a low-income daycare/school combination where the school offers a high level of school food programming and integrated, experiential education about food production

Chapter 6: Case 3—a high-income daycare/school combination where the school offers limited school food programming

Chapter 7: Comparative analysis

Chapter 8: Conclusions and Future Research Needs

7. Study Limitations/Delimitations

Because of the limited number of participants (27 student participants), my research project will not produce statistically relevant data. Instead, it will offer a meaningful, in-depth exploration of how school food and the school-eating environment impact the wellbeing of children who have transitioned to full day kindergarten from full day daycare.

8. Short- and Long-term Goals

I am interested both in following my initial cohort of participants in a longitudinal study as they move through the TDSB and in pursuing a larger, comparative wellbeing assessment project following the completion of my doctoral work. More specifically, I hope to work with a team in order to evaluate more components in each dimension of wellbeing, I hope to work with a statistically relevant population base, and I hope to do a comparative assessment between different regions in Canada.

9. Proposed Timeline

Proposed timeline—PhD 6

November 2013	Submit HPRP (ethics) Networking: daycares, schools, key actors
December 2013	Follow up on ethics and networking [Grade exams]
January 2014	Semi-structured interviews with key actors
February 2014	Chapter 2: Literature review and political landscape Recruit participants

March 2014	Chapter 3: Methods and Methodology Parent/caregiver surveys
April-May 2014	Naturalistic observations of children in a daycare setting
June, July and August 2014	Coding and analysis Maintain contact with participants [2 week daycare closure]

Proposed timeline—PhD 7

September 2014	Photo food diaries
October-November 2014	Mosaic approach
December 2014	Focus groups
December 2014-January 2015	Coding and analysis
February 2015	Chapter 4: Case 1
March 2015	Chapter 5: Case 2
April 2015	Chapter 6: Case 3
May 2015	Chapter 7: Comparative Analysis
June, July and August 2015	Chapter 8: Conclusions Chapter 1: Introduction Submit Revise Defend and revise again, if necessary.

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Appendices

Jayawickreme et al. (2012)
 Table 1 *Theories of Well-Being* (336)

Theory type		Theory	Widely used measures
Wanting		-Desire-fulfillment theories	-Income

		-Reinforcement theories -Idealized preference theories	-Behavioral measures of preference
Liking	Subjective well-being	-Positive emotions	-PANAS: Positive and Negative Affect Scale -DRM: Day Reconstruction Method -Experience sampling method
Needing	Objective	-Needs -Human development (as defined by the United Nation's Development Program's Human Development Index)	-Human Development Index
	Subjective	-Psychological well-being	-Psychological well-being scale
	Plural	-Well-being theory	-Plural measurement

Table 2 *The Engine Framework* (336)

Type	Role	Domains
Input	Exogenous resources and endogenous traits that influence well-being	-Income -Adequate nutrition -Political freedom -Education -Healthcare -Personality/strengths -Values -Talents/virtues -Needs -Capabilities
Process	Internal states that influence individual choices	-Positive affect -Cognitive evaluations -Self-control -Capabilities
Outcome	Voluntary behaviors characteristic of well-being	-Engagement/meaning -Accomplishment/contribution to the human heritage -Relationships -Goal-driven functionings

Konu and Rimpela's Conceptual Model for Well-being in schools (2002, 83)

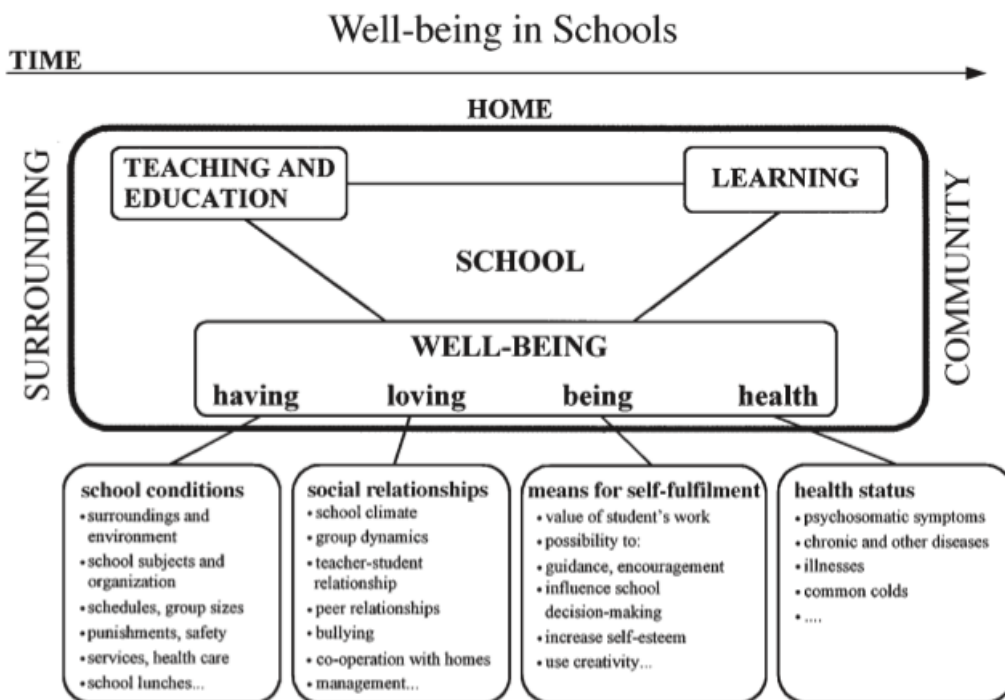


Fig. 1: The School Well-being Model.

Student Well-being Research Framework (3)

STUDENT WELL-BEING RESEARCH FRAMEWORK

Student Well-being Indicators	Level of Analysis		
	Student Measures	Classroom Measures	School Measures
Physical	<ul style="list-style-type: none"> • Physical Activity • Health Status • Safety 	<ul style="list-style-type: none"> • Organization • Size • Condition 	<ul style="list-style-type: none"> • Environment • Surroundings • Equipment
Cognitive	<ul style="list-style-type: none"> • Student Achievement • Engaged on Topics of Interest 	<ul style="list-style-type: none"> • Good Teaching • Value of Student Work • Guidance 	<ul style="list-style-type: none"> • Quality Programs • Leadership
Psycho-social	<ul style="list-style-type: none"> • Relationships (Resilience) • Self-Esteem • Emotional Regulation 	<ul style="list-style-type: none"> • Encouragement • Feedback 	<ul style="list-style-type: none"> • Climate/Culture • Relationships • Group Dynamics • Early Identification

QUESTIONS FOR KIDS, semi structured interview, picture and map drawing session

So, are you in kindergarten now?

Yeah? Do you like it?

Is your teacher nice?

~Follow up/question~

Are there other grown-ups in your classroom?

Do you like them?

What's the most fun thing at school?

~Follow up/question~

Is there anything that you don't really like at school?

~Follow up/question~

Do you get to eat lunch at school?

~Follow up/question~

Where do you eat at school?

Yeah? Could you draw a picture of it?

~picture drawing~

Is that with the kids in your class, or are there other kids there too?

Do you like that room?

Oh my goodness, silly me! I almost forgot to ask! Where do you get your lunch? Does your mom/dad/care giver make it for you before school or do grown-ups at school give it to you?

Cool! What's your favoritest, favoritest thing?

~Yum, that sounds good!

Is there anything you don't like?

~Hm. That makes sense.

Do the grown-ups help you with opening the containers in your lunch?

I can't really picture it, could you draw me a picture?

~picture drawing~

~Wow, that's nice! Thanks.

Hey, do you get to have snacks at school too?

~Really? That's awesome!

Do the grown-ups at school give you that or do you bring it from home?

~Ohhhh. I see.

And, do you get to eat snack whenever you're hungry?

Is that in your classroom?

Do you like that as much as where you eat lunch, or not so much?

~Yeah, I hear ya...

Hey, I can't really picture it—could you draw me a map of all the places at school where you eat? Do you know what a map is? It's a picture of where things are... yeah, just like in Dora. Do you think your map will sing too? 😊

~map drawing~

Do you want to put your other pictures on the map?

Do you want to draw yourself on the map?

~Wow. That's fantastic!

Hey, do you talk about food in your class with your teacher too?

Neat. Is that fun?

~Follow up/question~

Hey, I really like food, do you want to tell me anything else about food?

~Right on. Thanks so much for telling me. I've had a lot of fun hanging out with you!

SURVEYS FOR PARENTS (modeled after the TDSB's "TDSB Students and Families: Demographic Profile." (2013))

Ethno-Racial Background

Do you identify as White ____
 South Asian ____

East Asian ___
Black ___
Middle Eastern ___
Southeast Asian ___
Latin American ___
Aboriginal ___
Biracial ___, please explain:

Other ___, please explain:

Does your child identify as

White ___
South Asian ___
East Asian ___
Black ___
Middle Eastern ___
Southeast Asian ___
Latin American ___
Aboriginal ___
Biracial ___, please explain:

Other ___, please explain:

Home Language

What is the primary language spoken at home?

English ___
French ___
Other ___, please explain

Child's place of birth

Was your child born in Canada? Yes ___
No ___

If not, where was your child born?

Is that your country of origin? Yes ___
No ___

Parent presence at home

Who does the child live with?

Both parents ___
Mother only ___
Father only ___
Mother and step-parent ___
Father and step-parent ___
Extended family ___, please explain

Other ___, please

explain

Family size and composition

How many adults live in your household?

What are their relationships to the child (eg parent, uncle, grandparent, etc)?

How many children reside in your household?

1 ___

2 ___

3 or more ___

Are they your child's siblings? Yes ___

No ___

If not, please explain:

Parent education

What is the child's mother's highest level of education?

Elementary school or none ___

Secondary school ___

College ___

University ___

Post Graduate ___

What is the child's father's highest level of education?

Elementary school or none ___

Secondary school ___

College ___

University ___

Post Graduate ___

What is the child's primary care giver's highest level of education?

Elementary school or none ___

Secondary school ___

College ___

University ___

Post Graduate ___

Socio-economic status

What is the family's annual household income?

Less than \$30,000 ___

\$30,000 to \$49,999 ___

\$50,000 to \$74,999 ___

\$75,000 to \$99,999 ___

\$100,000 and up ___

Parent occupation

What type of work is the child's mother engaged in?

Non-remunerative ___

Unskilled clerical and trades ___

Skilled/semi-skilled clerical and trades ___

Semi-professional and middle management ___

Professional and senior management ___

What type of work is the child's father engaged in?

- Non-remunerative _____
- Unskilled clerical and trades _____
- Skilled/semi-skilled clerical and trades _____
- Semi-professional and middle management _____
- Professional and senior management _____

What type of work is the child's primary care giver engaged in?

- Non-remunerative _____
- Unskilled clerical and trades _____
- Skilled/semi-skilled clerical and trades _____
- Semi-professional and middle management _____
- Professional and senior management _____

Child and family dietary restrictions

Is your child unable to eat some foods due to either allergies or religious or cultural reasons?

Yes _____

No _____

If yes, please explain: -

FOCUS GROUP QUESTIONS FOR PARENTS (NOV)

***Note: as I review these questions, I'm starting to feel like these questions would be better handled in interviews or questionnaires, in part b/c I do not have access to the school setting and would like answers for each participant. I'm very open to discussion

How is school food set up for your child? Do you send lunch? Is there any kind of food program set up?

What, if anything, do you know about {the eating environment} where your child eats their snacks and lunches at school?

Are you satisfied with the eating arrangement at your child's school?

Do you feel that the school's eating environment has had an impact on your child? If so, what kind of an impact?

How would you compare this to the reports of your child's eating habits at daycare?

Do you feel that your child is satisfied with the school's eating arrangement?

How much of their lunch does your child eat on a typical day?

What kinds of food does your child eat at school? Is this different from what they eat at home?

If your child is with you after school, do you find that your child is hungry after school? If your child is in after care or some other program, do they report that your child is hungry after school.

Does your child say anything to you about eating at school?

Are you satisfied with the food and eating situation for your child?

Are there any areas that give you cause for concern?

Are you aware of other school food and eating situations in other schools?

What, if anything, would you change about the eating environment or the school food situation?

Are there any issues that stand out for you?

SEMI-STRUCTURED INTERVIEW QUESTIONS FOR KEY INFORMANTS

How does your work connect you to the world of school food in Toronto?

What is your vision for a strong school food program and healthy eating environments in schools?

How would you describe the school food landscape in the Toronto District School Board? Who are the key actors and what kinds of programs are offered?

Would you say that there is parity among school food offerings across the city?

To your knowledge, who typically pays for school food programming within the TDSB.

To your knowledge, how do the circumstances in the TDSB compare to those in other boards, both locally and across the country?

What would it take to get from where we are now to your vision of a strong school food program and healthy eating environments in schools? What are the necessary steps?

Appendix C: Supplemental Fieldwork Information

Fieldwork Dates Table

Table 13: Fieldwork dates 2014-2015

Name	P1 Observation	P1 WB Chart	P2A	P2B	P3
MB at Blueberry	June 3, 2014	June 18, 2014	Sept 15, 2014	N/A	April 27, 2015
RB at Blueberry	June 3, 2014	June 18, 2014	Sept 17, 2014	Oct 15, 2014	March 5, 2015
EB at Blueberry	June 5, 2014	June 18, 2014	Sept 17, 2014	Oct 15, 2014	April 24, 2015
BB at Blueberry	June 5, 2014	June 18, 2014	N/A	N/A	March 13, 2015
OB at Blueberry	June 9, 2014	June 18, 2014	Sept 17, 2014	Oct 15, 2014	March 25, 2015
LiB at Blueberry	June 9, 2014	June 18, 2014	Sept 17, 2014	Oct 15, 2014	N/A
JB at Blueberry	June 11, 2014	June 18, 2014	Sept 17, 2014	Oct 15, 2014	April 16, 2015
LB at Blueberry	June 11, 2014	June 18, 2014	Sept 17, 2014	Oct 15, 2014	May 14, 2015
DB at Blueberry	June 18, 2014	June 18, 2014	N/A	Oct 15, 2014	N/A
ZR at Raspberry	June 23, 2014	June 27, 2014	Sept 18, 2014	Oct 16, 2014	Jan 8, 2015
LR at Raspberry	June 23, 2014	June 27, 2014	Sept 18, 2014	Oct 16, 2014	Jan 29, 2015
KR at Raspberry	June 25, 2014	June 27, 2014	Sept 18, 2014	Oct 16, 2014	Jan 28, 2015
AR at Raspberry	June 25, 2014	June 27, 2014	N/A	N/A	Jan 7, 2015
SR at Raspberry	June 27, 2014	June 27, 2014	N/A	N/A	N/A
JaH at Huckleberry	July 7, 2014	July 17, 2014	Sept 19, 2014	Oct 17, 2014	May 29, 2015
AH at Huckleberry	July 7, 2014	July 17, 2014	Sept 19, 2014	Oct 17, 2014	May 19, 2015
NH at Huckleberry	July 8, 2014	July 17, 2014	Sept 19, 2014	Oct 17, 2014	Feb 11, 2015
GH at Huckleberry	July 8, 2014	July 17, 2014	Sept 19, 2014	N/A	June 4, 2015
MH at Huckleberry	July 9, 2014	July 17, 2014	N/A	Oct 17, 2014	May 22, 2015

JoH at Huckleberry	July 9, 2014	July 17, 2014	Sept 19, 2014	N/A	May 25, 2015
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N/A: Participant not available.

Key Informant Interview Dates

Table 14: Key Informant Interview Date Table

Name ⁸⁸	Relevant Role(s)	Interview Date
Kerry McCuaig	Early childhood policy fellow at the Atkinson Centre for Child Development, OISE; co-author of the “Early Years Study 3: Making Decisions, Taking Action”	May 6, 2015
Fidelia Torres	Instructor at the School of Early Childhood Education, George Brown College; Child Care Services Manager for the TDSB supporting the transition into the FDK program and the implementation of the FDK before and after school care program	June 18, 2015
Beverley Crossdale	Early Childhood Consultant with Community Living Toronto	September 15, 2014
R	In-house cook at the Raspberry Daycare	June 23, 2015
E	ECE at the Raspberry Daycare and Before and After School Program	June 23, 2015
CB	Lunchroom Supervisor at the Red Mulberry School	February 22, 2017
MS	OISE student-teacher at the Blueberry School; former ECE with kindergarten aged children prior to FDK	March 5, 2015
EC	TDSB kindergarten teacher; former ECE	July 13, 2016
DK	TDSB kindergarten teacher; parent of child at Red Mulberry School	November 17, 2014 June 25, 2015
MR	TDSB kindergarten teacher at the Red Mulberry School	April 24, 2015
IC	TDSB kindergarten teacher at the Huckleberry School	March 2, 2016
MD	TDSB kindergarten teacher	October 29, 2015
MRB	TDSB kindergarten teacher at the Raspberry School	June 25, 2015

⁸⁸ Only the names of key informants whose views are in the public domain have been included. All other key informants’ names have been withheld to protect the anonymity of the children they work with.

GT	Health and Physical Education teacher at the Raspberry School	June 25, 2015
JB	TDSB special needs teacher; parent of allergenic child at the Red Mulberry School	November 22, 2014
AS	Parent of children at the Red Mulberry School, moved to Raspberry School	December 1, 2014
NN	Lunchroom supervisor at Red Raspberry School	February 22, 2017
JJ	Special Needs Assistant at TDSB school in study area	June 2, 2017

Parent Survey

PARENT SURVEY

Part 1: Contact information

Full Name of Child Participant:

Preferred name/how does your child like to be addressed?

Date of birth:

Name of parent/guardian:

Daytime phone number:

Email address:

Preferred contact method:

If phone is preferred contact method, preferred times for phone calls:

Name of parent/guardian:

Daytime phone number:

Email address:

Preferred contact method:

If phone is preferred contact method, preferred times for phone calls:

Primary parent/guardian for research project contact:

Part 2: Food and Eating habits

Is your child unable to eat some foods due to either allergies or religious or for cultural reasons?

Yes ___

No ___

If yes, please explain:

How would you describe your child's eating at home (please circle all that apply):

Eats a wide variety of foods

Is very selective about what they eat

Eats quickly

Eats with pleasure

Eats slowly

Sometimes refuses to eat

Often refuses to eat

Are there other ways you would describe their eating at home?

What are your child's most favorite foods?

How frequently does your child eat these foods?

Which foods served at home does your child like least?

Does your child ever eat these foods? If so, how often?

Based on staff reports, do you feel that your child is more or less picky about what they eat at daycare compared to what they eat at home?

Please explain:

Do you have any concerns about your child's eating habits at home?

Please explain:

Do you have any concerns about your child's eating habits at daycare?

Please explain:

Where is your child enrolled for kindergarten in September 2014?

As you plan for your child to start full day kindergarten in September 2014, do you have any concerns related to the food they will eat at school or the environments where they will be eating?

What do you think would be the ideal food and eating environment for your child when they start full day kindergarten in the fall?

Part 3: Demographic Information

NOTE: this part is modeled after the TDSB's "TDSB Students and Families: Demographic Profile" (2013) to allow for comparison between the research sample and the school demographic profile.

Ethno-Racial Background

Do you identify as: White ____
 South Asian ____
 East Asian ____
 Black ____
 Middle Eastern ____
 Southeast Asian ____
 Latin American ____
 Aboriginal ____
 Biracial ____, please explain:

Other ____, please explain:

Does your child identify as:

White ____
South Asian ____
East Asian ____
Black ____
Middle Eastern ____
Southeast Asian ____
Latin American ____
Aboriginal ____
Biracial ____, please explain:

Other ____, please explain:

Home Language

What is the primary language spoken at home?

English ____

French ____

Other ____, please explain

Child's place of birth

Was your child born in Canada? Yes ____

No ____

If not, where was your child born?

Is that your country of origin? Yes ____

No ____

Parent presence at home

Who does the child live with?

Both parents ____

Mother only ____

Father only ____

Mother and step-parent ____

Father and step-parent ____

Extended family ____, please explain

Other ____, please

explain

Family size and composition

How many adults live in your household?

What are their relationships to the child (eg parent, uncle, grandparent, etc)?

How many children reside in your household?

1 ____

2 ____

3 or more ____

Are they your child's siblings? Yes ____

No ____

If not, please explain:

Parent education

What is the child's mother's highest level of education?

Elementary school or none ____

Secondary school ____

College ____

University ____

- Post Graduate ___
- What is the child's father's highest level of education?
 Elementary school or none ___
 Secondary school ___
 College ___
 University ___
 Post Graduate ___
- What is the child's primary care giver's highest level of education?
 Elementary school or none ___
 Secondary school ___
 College ___
 University ___
 Post Graduate ___
- Socio-economic status
- What is the family's annual household income?
 Less than \$30,000 ___
 \$30,000 to \$49,999 ___
 \$50,000 to \$74,999 ___
 \$75,000 to \$99,999 ___
 \$100,000 and up ___
- Parent occupation
- What type of work is the child's mother engaged in?
 Non-remunerative ___
 Clerical and trades (not formally trained) ___
 Clerical and trades (training/apprenticing) ___
 Semi-professional and middle management ___
 Professional and senior management ___
- What type of work is the child's father engaged in?
 Non-remunerative ___
 Clerical and trades (not formally trained) ___
 Clerical and trades (training/apprenticing) ___
 Semi-professional and middle management ___
 Professional and senior management ___
- What type of work is the child's primary care giver engaged in?
 Non-remunerative ___
 Clerical and trades (not formally trained) ___
 Clerical and trades (training/apprenticing) ___
 Semi-professional and middle management ___
 Professional and senior management ___

Semi-structured interview questions for kids

Phase 1: spring and summer 2014.

Hi ... do you want to talk into the microphone now?

Ok, do you want to push the button to turn it on?

Great job. It's recording what we say now, is that ok?

Cool. Could you say your name for the microphone?

So, where are we now?

Yeah. And do you like being at daycare?

Do you know who the grown-ups are in your room at daycare?

What are their names?

What's your favorite part about coming to daycare?

Yeah... [follow up on favorite aspects of daycare]

And do you eat food when you're here at daycare?

Right on. Could you tell me about your favorite things that you get to eat at daycare?

[Follow up on favorite things]

Do you ever get things to eat at daycare that you don't like so much?

Which things do you not like so much?

Oh yeah, that's ok.

And do you like eating at daycare?

Oh, that makes sense.

What about at home, what are your favorite things that your parents cook for you?

Oh, do you ever get that at daycare?

Oh, right on.

What about food you don't like so much, do your parents ever give you things you don't like so much?

Yeah, which foods do you get at home that you don't like so much?

Do you ever get that at daycare?

I see.

Would you like to draw a picture about eating at daycare?

Ok. [drawing time, with encouragement and questions about the drawing as they draw.]

That's fantastic. Is there anything else that you'd like to tell me about food?

[child introduced topics]

Awesome, thanks.

Should we turn the microphone off now?

Ok, would you like to turn the microphone off now?

Ok, it's this red button here... Good job. Thanks so much.

Phase 2: fall 2014.

Hi ... do you want to talk into the microphone now?

Ok, do you want to push the button to turn it on?

Great job. It's recording what we say now, is that ok?

Cool. Could you say your name for the microphone?

So, did you just start kindergarten?

Yeah? Do you like kindergarten?

Hm. So is kindergarten the same as daycare?

Oh, what's different about it?

Do you like that?

I see. And do you eat lunch at kindergarten?

And when you eat at kindergarten, what do you eat?

What is that like?

Where do you sit at lunchtime? [for those participants who are in the same room for aftercare as for the school day]

Cool. And how do you feel when you think about eating lunch at kindergarten?

Do you remember these faces from when we talked before?

Yeah? What do you think this one means?

[have participant describe all 5 faces on wellbeing chart]

Which of these faces looks like how you feel at lunchtime?

Oh.

[follow participant led comments about the food in their lunch]

[many participants talk extensively about the images on their lunch bags]

Phase 3: winter and spring 2015.

Four interviews per day per participant.

First interview:

Review faces on wellbeing chart

All four interviews:

Enquire about current activity and current feeling.

Attempt to review activities prior to interview and feelings at that time.

Pursue themes related to food and feelings.

Appendix D: Analytic Codes

Coding categories

Material security/physical environment.

SETTING

Site: Daycare/phase 1, aftercare/phases 2a & 2b, school/phase 3

Season: winter or inclement weather—both as it pertains to limited outdoor play and prevalence of health concerns

Type of day: day of the week, day of the 5-day school schedule, recent illness

Digital media: how heavily is it used (if at all), participants' ability to remain engaged in other activities when any student is using digital media

DEMOGRAPHIC COMPARISONS

Age: specified to the month—the kids are so young that a few months can make a big difference developmentally

Gender: do challenges cluster differently between genders?

Frequency that girls vs. boys are not called on when hands are raised (a pattern is emerging)

Household income range

Household income relative to school average

Household income range relative to poverty line

ACTIVITY

Outdoor start vs. indoor start (in phase 3)

Relate the wellbeing charts to activity:

Time of day

Frequency

How active

FOOD

Food preferences in each of 3 phases:

Liked vs. not liked

Favourite food in the childcare setting vs. home

Least favourite food in the childcare setting vs. home

Daycare vs. school food

Eating at school vs. daycare vs. aftercare vs. home

Favourite things parents send

Prevalence of fresh vs. pre-packed/prepared foods in packed lunches

Prevalence of 'sugary' foods

Proportion of food eaten

Proportions eaten in each category

Protein, carb, produce, liquid

Fresh/homemade/handmade vs pre-packed/prepared

Compare consumption in daycare setting to school setting

Overall observed eating habits P1 vs. P3

Engagement/cognitive development.

OBSERVABLE BEHAVIOURS

Rate of verbal dysfluency across 3 phases

Fidgeting/movement during lessons, phase 3

Attentiveness during carpet/lesson/listening/passive learning times

Attentiveness during small group work or one-on-one instruction

DATA ON WELLBEING CHARTS

Was the participant able to remember the wellbeing chart from one phase to the next?

How consistently did the participant identify the faces across the three phases?

Does the participant always select the same face/wellbeing representation?

Has the participant created some rule about what face to choose? For example, one participant wanted to choose a face not previously chosen every time they were asked.

Is the participant able to articulate why they have made a particular selection?

Does the participant vary their selection based on discussion?

Can the participant identify different feelings in their recent past? For example, “I was feeling angry when my classmate kicked me. Now I feel happy because we are going outside.”

INTERVIEW DATA

Was the participant able to narrate or recall their own day accurately in interviews as compared with field observations?

How much did the participant’s ability to narrate, or recall, their own day evolve from P1 to P3?

What proportion of the interview was independent speech as compared to yes/no answers?

What proportion of the interview, if any, did the participant nod their answers in lieu of speaking?

Highlight all relevant participant introduced topics. For example, a significant proportion of participants raised that they “never, ever, ever have enough time to eat” their lunch at lunch time.

Consider all other participant introduced topics developmentally. For example, one participant exhibited a fascination with zombies over the course of all three phases, another talked about a sibling with intense focus, and another discussed travel extensively.

Relationship/psychosocial development.

PEER INTERACTIONS

Compare peer interactions when there are no peers from the childcare setting in the classroom vs. when there are.

Does participant freely interact with classmates who they did not already know from the childcare setting?

Do the participants form a group in the classroom setting?

Does the participant engage in creative play with peers or is play limited to parallel play?

How does the participant’s social problem-solving skill set evolve over the 3 phases?

Does the participant appear to have bonded relationships with peers?

Do the participant’s peer relationships appear to augment or diminish their eating environment?

Problem solving and responses when peers seek attention during lesson times.

Compare peer-to-peer interactions in structured play, unstructured play, indoor play, outdoor play and lesson settings.

INTERACTIONS WITH ADULTS

Childcare setting

Responsiveness to ECE during daycare meals

Expressions of emotional bond with daycare ECE

Interactions with ECE in indoor and outdoor settings

School setting

Class size

Student to staff ratio

Responsiveness to teacher

Responsiveness to ECE

Level of ECE involvement

In lesson planning

In class design/layout

Donated presence at lunch time

Whether the lunch supervisor is an ECE or an untrained adult

With researcher

Level of enthusiasm for interviews

How well participant remembers researcher

Wellbeing charts.

WELLBING CHARTS

time of day

activity type

setting

reliability

do they posit current feeling to other times?

do they vary their feeling at all?

are their proclamations consistent with observed expressions?

NVIVO coding nodes

FOOD

- hungry, eating, sated, full
- likes & dislikes/preferences
- setting specifics (how many kids per table, who are they sitting with)
- references to social interactions during meal times
- discussion about having enough time to eat
- food sequencing
- staff interactions
- parent interactions

ENERGY

High energy

- active, energetic
- gross motor

low energy

- still
- tired or lethargic
- references to nap, resting

MOOD

Mood accuracy

- ability to recall faces on chart
- ability to identify current mood
- ability to identify recent mood

mood preferences

-liked activities

-disliked activities

COGNITION

Cognition engagement

-engaged in directed activity

-engaged in self-directed activity

cognition passive learning

-attentive during passive learning

-fidgeting during passive learning

cognition participation

-called on when hand is raised

-not called on when hand is raised

-called on when hand is not raised

STAFF

-Adult to child ratio/number of adults & children in the room

-level of training—ECE, teacher, untrained adult

-ECE lunch

-non-ECE lunch

-staff donating time to aid in lunch supervision

AWARENESS

Awareness of self

-does the participant know where they are?

-does the participant know who their staff are?

-does the participant know their own routine?

- does the participant like their setting? (daycare, after care, school)
- can the participant recount basic facts about themselves?

Awareness of feeling

- can the participant articulate their current feeling?
- can the participant recall how they felt in the very recent past?
- can the participant anticipate near future feelings?

Awareness distraction

- is the participant distracted by peer interruptions?
- is the participant distracted by use of media in the classroom?
- is the participant focused on using media at every opportunity?

TIME STRUCTURE RATIOS

- gross motor
 - outdoors or gym
- centre time
 - indoor play in childcare setting or centre time in school setting
- passive learning
 - story time and carpet time in childcare setting
 - carpet time in school setting
- music/dance

WELLBEING CHART

- faces
 - identifying or speaking about the meaning of the faces on the chart
- responses

- P1 four times per participant
- P2 two times per participant
- P3 four times per participant

OTHER

- Nonverbal communication/responding with nods & one-word answers
- Child-initiated observations
- Participant intrusions
- Non-participant intrusions
- Non-participants wishing to participate
- Interest in technology (e.g. note taking device or microphone)
- creative play
- Participant redirecting conversation to other themes
 - siblings, zombies, superheroes, etc.
- Participant being:
 - silly
 - shy
 - unintelligible

Appendix E: Complete Manuscripts

Manuscript 1: Sites, Settings & Self-Reported Wellbeing

Title: Child Wellbeing in School Eating Environments

Abstract:

This study explored the impact of school eating environments on the wellbeing of children in the Full Day Kindergarten (FDK) Early Learning Program in the Toronto District School Board (TDSB) and compared children's experiences of eating in FDK with those in childcare settings. Drawing on critiques of dominant approaches to evaluation, the study employed a wellbeing model that includes material security, relationship, engagement and meaning and used the Mosaic approach to participatory research with young children. Structured across three phases, the study employed a combination of observations, semi-structured interviews, self-reported wellbeing and parent surveys in working with a cohort of children in three childcare centre-school pairings as they transitioned from full day childcare to full day kindergarten. This article outlines findings related to sites, settings and child participants' self-reported wellbeing and points to the overall superiority of the eating environments in the childcare settings and to best practices within the school eating environment.

Key words: Early childhood; Wellbeing; School Eating Environments; Child Wellbeing; Full Day Kindergarten

The term 'school food' conjures up images of school lunch programs but, as the only G7 country without a national school food program, the reality of school food in Canada is an uneven patchwork of projects and programs with varying levels of service provision across the country, within school boards and, even within individual schools. Consequently, when researching children's eating experiences at school, it is imperative to understand the structural opportunities and constraints provided by their eating environments. The province of Ontario has recently transitioned from a half day program for kindergarten children to a full day kindergarten (FDK) program, with a rollout that extended from the 2010/11 school year to the 2014/15 school year. This has meant that the three-to-five-year-old students enrolled in the FDK program eat lunch and one or two snacks while at school for the first time ever. The "Full Day Early-Learning Kindergarten Program, Draft Version" (Ontario Ministry of Education 2010a) notes in the category, "Physical Health & Wellbeing," that "children need small amounts of food that are

eaten at regular intervals” No further parameters are offered. Prior to the advent of FDK in Ontario, three-to-five-year-olds in full day care would have had their care regulated through the Day Nurseries Act (DNA) which outlined detailed, age-specific policies and regulations to support nutrition, eating and eating environments⁸⁹. When compared to the childcare centre setting, the kindergarten school eating environment is relatively unregulated.⁹⁰ This study, conducted in the final year of the FDK rollout, explores how the differences between the childcare centre eating environment and the school eating environment impact the wellbeing of children transitioning from full day childcare centre to full day kindergarten.

Methodology

The study uses a wellbeing model with three domains—material security, engagement and relationship—to compare the impact of the childcare centre eating environment to that of the kindergarten eating environment on the wellbeing of a cohort of children at three childcare centre-school pairings as they transition from full day childcare centre to full day kindergarten in the Toronto District School Board (TDSB). This article outlines findings related to sites, Settings, including seating arrangements, staffing and food provisioning on the childcare centre and school eating environments at both lunch and snack times, and child participants’ self-reported wellbeing.

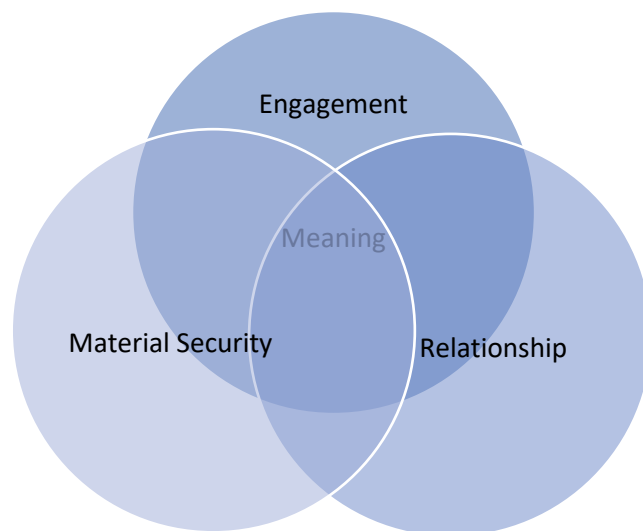
⁸⁹ This study was conducted during the final year of the DNA which has subsequently been replaced by the Child Care and Early Years Act (CCEYA). The CCEYA has retained the nutrition regulations set out in the DNA and has added regulations pertaining to allergies, special dietary needs, special feeding arrangements and “Eating Well with Canada’s Food Guide—First Nations, Inuit & Metis” (Government of Ontario, 2014).

⁹⁰ The Ontario Ministry of Education’s School Food and Beverage Policy, Policy/Program Memorandum no. 150 (PPM 150), regulates “food sold on school property through cafeterias, vending machines and tuck shops; through all programs, including catered lunch programs; and at all events on school property, including bake sales and sports events” (2010b) but offers neither guidelines on eating environments nor specific staffing requirements for very young children.

2.1 Analytic Framework

Wellbeing is evaluated according to a model drawing on Amartya Sen's (1999) Capabilities Approach, Diener and Seligman's (2004) work on wellbeing and Martin Seligman's (2011) work on flourishing. This model offers three domains—material security, engagement and relationship—with meaning at the core, underlying each domain (Figure 1). These domains align with existing assessment categories for school food (Brown, Beardslee and Prothrow-Stith, 2008), Konu and Rimpela's (2002) conceptual model for wellbeing in schools, and the Ontario Ministry of Education's (2011) student wellbeing research framework.

Figure 1: Wellbeing model.



2.2 Methods

The study was qualitative and employed a mixed methods approach. In working with child participants the Mosaic approach was employed, along with researcher observations. The Mosaic approach is a qualitative research technique designed for participatory research with children under the age of 5 (Clark and Moss 2001). This approach recognizes “children as experts in their own lives” and advocates listening to children more rather than assuming that adults already know the answers (Clark and Moss 2001). In this study, child participants introduced the researcher to their space and the people in it, were invited to situate themselves on a happy face wellbeing chart, drew pictures reflecting their experiences of eating and shared their experiences in semi-structured interviews. Additionally, staff in study childcare centres, aftercare programs and schools sought the opportunity to share their understanding of participants and their experiences within each of the eating environments. To further contextualize the data collected from the children and their caregivers, the parents of participants were surveyed and 18 key actors were interviewed.

2.2.1 Phases: Participant Research and Parent Surveys

The study was conducted in three phases. During phase one (P1) full day observations were conducted in the childcare centre setting in the spring and summer of 2014. At each site, two participants were observed each day, with detailed notes on each participant’s activities and apparent mood for 5 out of every 15 minutes⁹¹. At the end of the day each participant was invited to have an interview about food and eating at the childcare centre and to also draw a picture reflecting their experiences. Additionally, each participant was invited to situate

⁹¹ This is in keeping with Tudge and Hogan’s ecological approach to observations of children’s everyday lives (2005, p. 108).

themselves on a happy face wellbeing chart once every 90 minutes (excluding nap time). Parent surveys were also conducted during phase one.

Phase two (P2) followed the participants as they entered junior kindergarten in the fall of 2014. Each participant was interviewed twice, once in September and once in October, about their experience of starting kindergarten. For many participants, their after-school care room was also their classroom during the school day. The participants were asked about how they felt about starting kindergarten, what the differences are between childcare centre and kindergarten, and what they could remember about eating at kindergarten. They were also invited to indicate their feelings using the, now familiar, happy face wellbeing chart.

In phase (P3) three each participant was observed for one full day in their classroom setting over the course of the winter and spring of 2015. As in P1, detailed notes were taken for 5 of every 15 minutes. In P3, participants were interviewed four times per observation day at the same time as they were situating themselves on the happy face wellbeing chart once per 90-minute interval.

2.2.2 Interviews

The data provided by working with the child participants and surveying their parents was contextualized with interviews with adults working in the field. In addition to the information provided by the staff during each of the three phases, 18 key actor interviews were conducted between September 2014 and February 2017, including Kerry McCuaig, Early Childhood policy fellow at the Atkinson Centre for Child Development, OISE, Fidelia Torres, Instructor at the

School of Early Childhood Education, George Brown College, and Beverly Crossdale, Early Childhood Consultant with Community Living Toronto. The remaining interviews were conducted with 9 TDSB kindergarten teachers, 1 TDSB lunchroom supervisor, the in-house cook at one of the childcare centre sites, an ECE with the before and after care program at one of the sites, 2 parents of children who had attended FDK in the TDSB, and an OISE student-teacher who had previously worked as an ECE with kindergarten aged children in Toronto.

Findings

3.1 Sites

The study was conducted at three TDSB schools, each of which housed independently run childcare centres that offered both full-day childcare for younger children and before and after school care for school-aged children. This section describes the childcare, after-school care and kindergarten settings at each of the three sites as observed in each of the three phases.

3.1.1 Phase 1

All three childcare centres—Blueberry, Raspberry and Huckleberry—are not-for-profit, licensed childcare centres that are eligible for the City of Toronto childcare centre subsidy and, also offer before and after school care to children once they start school.⁹² This ensured a level of continuity for participants. Children in the study were both already acclimated to full days away from their parents within the school building and received care from familiar adults during part

⁹² At some schools in the TDSB, childcare for pre-school aged children and before and after school care for school aged children are offered by separate organizations. In fact, in some schools as many as four separate groups operate childcare centres and before and after school care in the school building.

of their day as they transitioned to FDK. By regulation, the staff-to-child ratio in the preschool rooms is 1:8 with a maximum of 16 children in the room. On the 12 observation days in P1, there was only one day with as many as 15 children, while 13 or 14 kids were present on the remaining days. Furthermore, due to the presence of students doing their practicum for their early childhood education training and other support staff, there were often more than 2 trained adults in each room, sometimes as many as 4 were present, with the effect that staff-to-child ratios were consistently better than 1:8 on all childcare centre observation days.

3.1.2 Phase 2

Phase two interviews were conducted in the after-school care setting (commonly referred to as ‘aftercare’) which, at all three sites, was also the regular classroom for some of the participants. At the Blueberry⁹³ site, the aftercare room was the regular classroom for 4 of the participants; at the Raspberry site it was the regular classroom for 2 of the participants; and at the Huckleberry site it was the regular classroom for 4 of the participants. This is significant because 10 of 17 full study participants benefitted from fewer transitions over the course of their day and research has demonstrated that transitions are challenging for young children (Hemmeter, Ostrosky, Artman and Kinder 2008). Additionally, those participants who were in their regular classroom during their after-school interviews were able to indicate where they sat for lunch and snack times and had a comparatively easy time recalling their daytime experiences.

3.1.3 Phase 3

⁹³ The names of the childcare centre-school pairings have been altered to protect the anonymity of participants.

In phase three, the participants at the three childcare centre-school pairings were, for the first time within the study, spread out into eight classrooms. At the Blueberry School, 4 participants were in the east room that also served as the aftercare room and 3 participants were in the west classroom; at the Raspberry school, 2 participants were in the north-east classroom that also served as the aftercare room and there was 1 participant in in the north-west class and another in the south-west class; and at the Huckleberry School, 4 participants were in the northwest class with only 14 students that also served as the aftercare room and there was 1 participant in the north class and 1 participant in the east class. The classes at the Blueberry School had 24 and 27 students, respectively; the Raspberry School classes had 33, 32 and 33 students; while at the Huckleberry School the classes had 14, 28 and 28 students (see Table 1). Seven of the classrooms were staffed by a classroom teacher and an Early Childhood Educator (ECE)⁹⁴, while the class with 14 students was staffed by only a classroom teacher. It is worth noting that, in addition to having greater numbers of children and fewer staff per child, the physical size of the classrooms was notably smaller than the rooms used for the preschool aged children during phase one.

Table 1: Participant distribution in kindergarten classrooms.

Site	Participants	# of full study participants	Total # of students in the class
East classroom Blueberry School	JB, MB, EB, LB	4	24
West Classroom Blueberry School	BB, OB, RB	3	27
North-East Classroom Raspberry School	AR, LR	2	33
North-West Classroom Raspberry School	KR	1	32
South-West Classroom	ZR	1	33

⁹⁴ There were points in each day when, during the break of one of the regular staff members, the classrooms were staffed by one member of the teaching team.

Raspberry School			
North-West Classroom Huckleberry School	NH, JaH, JoH, AH	4	14
North Classroom Huckleberry School	MH	1	28
East Classroom Huckleberry School	GH	1	28

3.2 Setting: seating arrangements, staffing and food provisioning

The setting for both lunch and snack times were directly observed during the first and the third phases, with some participants being interviewed during eating times in P3. Some participants discussed their after-school snack setting during P2, though this phase was limited to brief interviews as the aftercare setting itself was not part of this research.

3.2.1 Phase 1

The purpose of phase one was to establish a baseline for how the child participants felt about their experiences of eating with their peers in an eating environment structured by the clear regulations set out in the Day Nurseries Act.

At the Blueberry Childcare Centre, children ate their lunch and snacks at U-shaped tables which could seat up to 8 children with one staff member in the centre of the U to help facilitate the meal. The children were positioned according to a seating arrangement determined by the ECEs, indicated with colourful placemats the children had designed themselves. Other staff members brought the food provided by a catering service to the table, so that the attending staff member at each table could sit with the children at all times. At each table, the staff began by

offering a choice of vegetables, when the children were most hungry. Then a hot meal including starch and protein was offered, followed by a drink and a choice of fruit. The staff referred to this approach as ‘sequencing’ and used it to encourage healthy eating habits while allowing the children to make their own choices. In addition, the attending staff member also ate with the children to model meal time behavior. Children had the opportunity to make choices, serve themselves and participate in mealtime socialization. This setting was a calm, quiet and sociable mealtime environment.

Similarly, the children at the Raspberry Childcare Centre sat at two tables, each of which accommodated up to 8 children. Each of the rectangular tables was attended to by one staff member, who neither sat with the children nor ate with them. The food was brought in by the onsite cook and one additional staff member and the children were observed to show warm feelings toward the cook. The attending staff member at each table served the food offering each child the chance to let them know if they wanted “everything at once” or to have the items “one at a time.” The staff instructed the children where to sit and the room was quiet, though there was minimal socialization.

At the Huckleberry Childcare Centre, the children sat among three tables. There was no seating arrangement, though the staff did separate particular children who were deemed to be “causing trouble” when necessary. On two of the observation days staff served lunch, while on the other two the children served themselves. On both of the days that the staff served lunch, the sequencing technique was used and on one of those days staff were observed telling children that they would not be served the hot lunch until they had eaten their vegetables. Because there was no additional staff to aid in food provisioning, much of the staff’s time was consumed with

serving and tidying up food, leaving little time to offer guidance for mealtime socialization. This lunch setting was less calm than the other two settings. It is worth noting, that this childcare centre began their lunch time half an hour later than the other two childcare centres in the study and each observation day, even before lunch had begun, both participants and other children were visibly tired before the meal started. All three childcare centres used the same seating model for both lunch and snack.

3.2.2 Phase 2

The purpose of phase two was to speak with the children about their experiences of transitioning to FDK in a familiar setting and not to assess the after-school care environment.

3.2.3 Phase 3

While the participants all ate both lunch and snack in their classrooms in phase three, there were a variety of arrangements because, by this point, the participants were spread across eight classrooms. Additionally, in every classroom the lunch time strategy differed from the snack time strategy and, in some classrooms, multiple snack time strategies were employed.

3.2.3.1 Lunch

Though hot lunch programs were available at two of the study sites, all participants in the study brought their own lunch from home. At the Blueberry School, the hot lunch program was available to the grade one to eight students in the lunchroom, but not the kindergarten students,

who ate lunch in their classroom. At the Huckleberry School a program was offered two days a week, and registered children were served a hot lunch at the classroom door. Only five of the 69 kindergarten children subscribed. In both cases the cost of the hot lunch was five dollars per meal. The Raspberry School did not offer a hot lunch program to any of the students.

As noted above, participants at the Blueberry School were divided among two classrooms. In the east classroom, the lunchroom supervisor had a seating arrangement for the children and outlined the lunchroom rules for the children every observation day. The supervisor, who was untrained, also let the students know how much time was left every five minutes. On the four observation days, the lunch period began calmly and became increasingly rowdy as time progressed. One day the room was relatively calm for nearly the entire 20-minute lunch period, another it was chaotic within five minutes, and the other two were calm for the first 10 to 12 minutes. Using the classroom tables, the lunchroom supervisor had children in groups of three to five per table.

The west classroom at the Blueberry School was also supervised by an untrained adult, and the supervisor had limited English skills to communicate with students. The classroom ECE and other staff members donated their lunch break to assist. The children were seated at five tables, each with two to seven children. On all three observation days, there were three to five staff members present during the lunch time, so most tables had an attending staff member and the lunch time was calm. The assisting staff were observed organizing where the children sat. It is not clear whether this staffing arrangement extended beyond observation days. Both classrooms at the Blueberry School also had students from older grades present during eating times. This was described as an additional support, though on observation days, the older students were only observed to offer support when either the school principal or classroom teacher was present.

At the Raspberry School, four participants were spread among three classrooms, so there were comparatively limited opportunities to observe each classroom. In the north-east classroom, the lunchroom supervisor was a trained ECE who also worked with some of the children in the before and after school program. The supervisor had established a seating arrangement during the fall, pairing students who had less difficulty during the lunch time with those who had more difficulty and separating what they referred to as “the chatters”. Well aware of which children at each table required the most assistance, the lunch time supervisor easily circulated among the tables of four to five children offering guidance to those who needed it and ushering the few children who finished quickly to quiet reading on the carpet. Though this was one of the largest classes in the study, with 33 students, it was also one of the three most effective school lunch rooms in that children were able to eat their lunches in a safe and calm environment. It was the most effective lunchroom with only one staff member, even on an observation day when there was no outdoor play due to inclement weather.

Though the other two classrooms at the Raspberry School employed a similar seating arrangement—four to five children per table, established in the fall—the results were not the same. They were both staffed by untrained adults and were observed to become loud and chaotic within the first five minutes of the lunch time. In the north-west classroom, the lunch supervisor expressed concern the moment we were introduced about not having training. Though there were spills that could not be cleaned and the room was loud and somewhat chaotic, there were no incidents in this room on the observation day. In the south-west classroom, also using a similar seating strategy, a toileting accident rendered the washroom inaccessible to students and two separate physical altercations between the children overwhelmed the lone staff person. In this

classroom, a very good-natured participant dragged children trying to eat around on their chairs. Other students were also moving other furniture in the room. During the course of the 20-minute lunch period, multiple non-participants sustained minor injuries, more than 50 per cent of students ate less than half their lunch. The room had been reorganized and food was all over the floor.

At the Huckleberry School lunch time, the one class with multiple participants showed considerable variability during the observation days. On the first, the lunch was supervised by a person who had completed the classroom portion of their ECE training but had not yet completed their practicum. Eleven of the 14 students were present that day and were seated at tables of four, three and two. The supervisor explained that it had taken approximately a month and a half to establish the lunch room rules and seating arrangement. At the beginning of the year, “lunch was crazy. I can’t explain it, it was just crazy.” On the second observation day, two of the students described by teachers as “behavioural” were absent and, the teacher explained repeatedly, the day was abnormally calm. During lunch time, the supply lunch supervisor was late, so the classroom teacher supervised the majority of the lunch time, which was calm, like the rest of that day. The final two observation days were unlike any of the other observation days in the study. By this point, the initial lunchroom supervisor had been replaced by an untrained adult and the two “behavioural” students, who were both participants in the study, were present. On the third observation day, the participant (one of the students the staff identified as behavioural) attacked three female students in five separate incidents and threatened two male students. This participant did not eat during the lunch time and, additionally, interfered with the ability of over half of the class to eat. On the fourth observation day, the participant ate quickly and, in the few remaining minutes, hit three female students and one male student, one of them multiple times.

Later the participant began crying and the lunch time supervisor was not able to console him. It is worth noting that immediately after lunch, once the teacher had returned, this participant was calmer and was able to verbalize annoyance, rather than use violence. Though the seating arrangement remained in place, the character of the room changed dramatically.

The other two classes at the Huckleberry School were both supervised by ECEs who were also staff members at the onsite before- and after - school care program. In the east room, the classroom ECE stays for the lunch time and, in the north room, both the classroom ECE and teacher donate their time to offer additional support during the lunch time. The ECE in the north room explained that they do this because “at the start of the year [lunch] was too chaotic.” While neither room employs a formal seating arrangement, both rooms offer a calm and effective lunch setting for the children.

3.2.3.2 Snack

Both the Blueberry and Raspberry Schools offer a snack program and request a voluntary parental donation. Students are not excluded based on inability to pay, though parental consent is required. At both schools, all students present were observed participating in the school snack program. There was no snack program at the Huckleberry School. The structure for snack time in each of the eight classrooms was as follows (Table 2).

Table 2: Snack structure

School	Classroom	When	Set up	Food
Blueberry	East	Days 1,3,5	Structured	AM: school provided PM: from home
		Days 2,4	Centre	AM: school provided PM: from home

Blueberry	West	AM PM	Structured Centre	Both school provided snack, though students may also eat from their lunch bag during afternoon snack centre
Raspberry	North-East	AM & PM AM PM	Structured Structured Centre	AM: school provided PM: from home AM: school provided PM: from home
Raspberry	North-West	AM & PM	Centre	School provided
	South-West	AM & PM	Structured	AM: from home PM: school provided
Huckleberry	North	AM & PM	Centre	From home*
Huckleberry	East	AM & PM	Structured	From home*
Huckleberry	North-West**	AM & PM	Centre	From home*

*no snack program available; **classroom with 14 students

In the east classroom at the Blueberry School, two different strategies for snack time were employed. The school has a five-day rotation—in the east classroom, on days 1, 3 and 5 snack was offered as a station during ‘centre time’, a feature of the play-based learning time in the province of Ontario’s FDK program. On days 2 and 4 the class had a structured snack time when the children all sat and ate snack at the same time, with the staff team providing the children the food. While the ‘station’ approach is meant to promote self-regulation, one of the key goals of the FDK program, none of the participants was observed to be capable of using the snack station.⁹⁵ In this classroom, the structured snack time offered a chance for children to receive guidance in hand washing and table manners during a shared eating experience with their peers.

The teacher in the west classroom at the Blueberry School consistently offered a structured snack time in the morning and snack as a station in the afternoon. For morning snack, the students sat on the carpet and used hand sanitizer for efficiency, though the classroom was equipped with two sinks. Participants and other students were observed to enjoy the shared eating time with their peers. In the afternoon, students who were hungry were free to attend the snack station.

At the Raspberry School, both structured and center-time approaches were used. In the north-east classroom, the teacher employed a structured approach for both morning and afternoon on one observation day and in the morning on the second observation day. During the structured snack time, four to eight children were seated at each of four tables and had 15 minutes to eat a small snack with the supervision of both the classroom teacher and ECE. An ECE student and four grade-five students provided additional support. The students were observed to eat and receive staff guidance during these snack times. On the day that the afternoon snack was operated as a centre, students were observed making use of the snack

⁹⁵ Observations suggest that the inability of students to effectively use the snack station at centre time may have been due to the use of a Promethean Board (an interactive white board with internet access), showing children’s music videos and television shows during centre time. One participant was observed going to snack table and telling the researcher that he was hungry but finding himself so enthralled by the videos that he ate nothing. This was not an uncommon occurrence in this classroom.

centre. In the north-west classroom, snack was available as a center throughout the entire day. The teacher explained that this was part of the policy to promote self-regulation. By contrast, in the south-west classroom, the teacher employed a structured snack time in both the morning and the afternoon, having the children snack from their lunches in the morning and offering the school snack in the afternoon. The teacher had observed that the children were hungrier in the afternoon though this may be due to the challenges during lunch time described above.⁹⁶

Two of the three classrooms at the Huckleberry School exclusively used the centre-time approach, while the other classroom exclusively used the structured approach. In the north-west class, the centre-time approach appeared effective, though it was noted that one of the teacher-described “behavioural” students ate enough during centre time that he wasn’t hungry at lunch and was disruptive while his peers were eating. In the east class, the teacher described the center-time approach as an effective ECE driven strategy, explaining that the use of a structured snack time earlier in the year had consumed too much class time. It is worth noting, however, that the one participant in that class ate so much for morning snack, just 20 minutes before lunch, that he was unable to eat at lunch time and then complained of hunger shortly after lunch. The north classroom effectively used a structured snack time on the carpet in both the morning and afternoon.

3.4 Children’s Self-Reported Wellbeing

Child participants self-reported their wellbeing in multiple short interviews using a developmentally appropriate wellbeing chart, represented numerically here as follows: ‘super happy’/WB5; ‘happy’/WB4; ‘in the middle’ or neutral/WB3; ‘sad’/WB2; ‘super sad’ or ‘angry’/WB1.

Table 3: Children’s self-reported experiences of eating at the Blueberry Childcare centre and School

	Phase 1	Phase 2a	Phase 2b	Phase 3
EB	5	4	5	5
JB	5	5	4	5
LB	3*	4	n/a	5
MB	5	n/a	n/a	4 & 2
BB	5	n/a	n/a	4
OB	5	4	n/a	5
RB	n/a	4	4	2
DB	5	n/a	n/a	n/a
LiB	5	1**	3**	n/a

*before lunch; **no longer at Blueberry School, but still in the after-school care program

Table 4: Children’s self-reported experiences of eating at the Raspberry Childcare centre and School

	Phase 1	Phase 2a	Phase 2b	Phase 3
AR	5	3 & 5	n/a	3 & 5
LR	3 & 4	4	2	1

⁹⁶ In the classes where the lunch environment was calm and students were more able to eat, the majority of children ate little or nothing in the afternoon and did not comment on hunger.

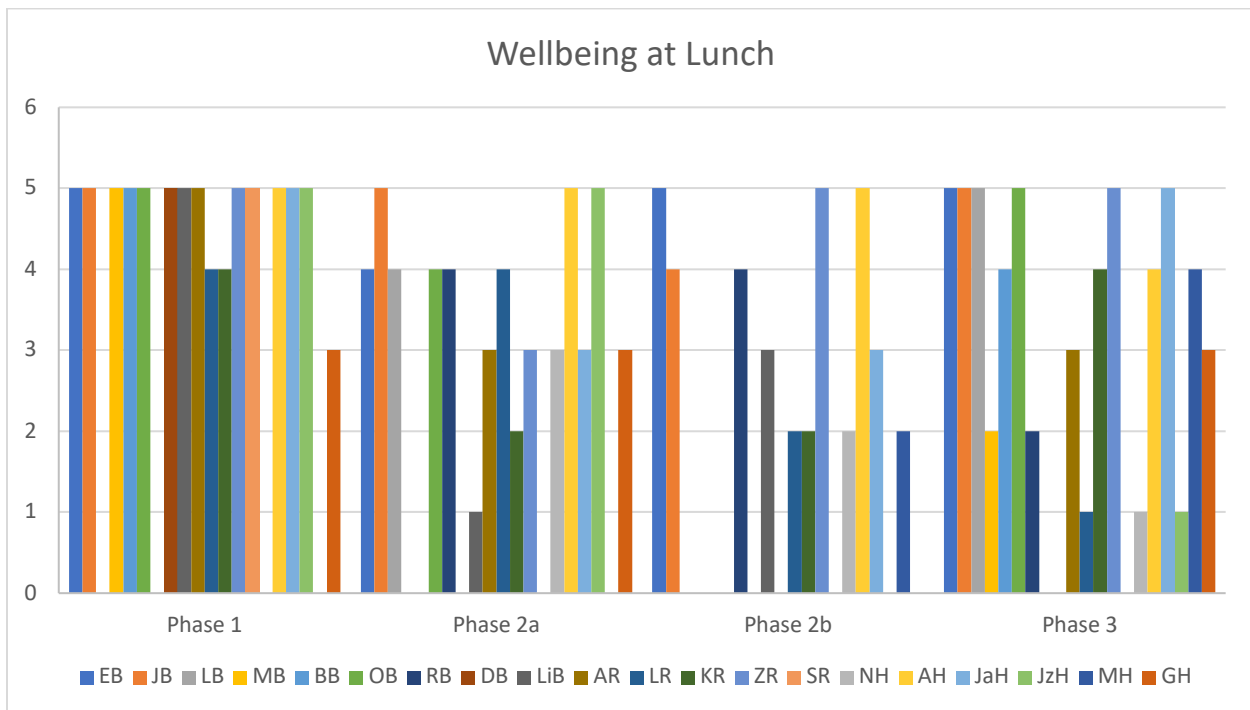
KR	4	4 & 2	2	4
ZR	5	3	5	5
SR	5	n/a	n/a	n/a

Table 5: Children’s self-reported experiences of eating at the Huckleberry Childcare centre and School

	Phase 1	Phase 2a	Phase 2b	Phase 3
NH	1*	3	2	1 & 5
AH	5	5	5	4
JaH	5	3	3	5
JoH	5	5	n/a	1
MH	n/a	n/a	2	4
GH	3	3	n/a	3

*sad throughout the day that day; **exclusively reported feeling neutral

Figure 1: Children’s self-reported lunchtime wellbeing across all phases at all sites.



3.4.1 Phase 1

Children’s experiences of eating at all three sites were overwhelmingly positive. In fact, with the exception of three participants—participant LB, who was interviewed before lunch when he was hungry, participant NH, who was tired and crying for mom, and participant GH,

who only ever reported feeling “kinda in the middle” about any eating experience—the children all reported feeling ‘happy’ or ‘super happy’ about eating at childcare centres.

3.4.2 Phase 2

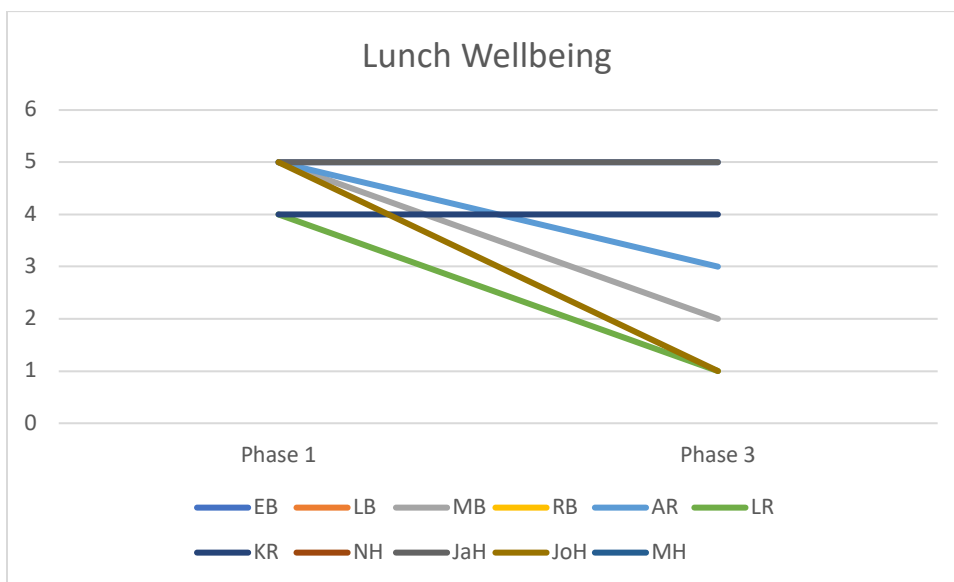
Phase two involved asking the participants to recall, after school, how they had felt about lunch earlier that day. Both because memory is constructive (and not reproductive) and the participants were only three or four years old during phase two, this data may be less reliable than the in situ data from phases one and three. Nonetheless, it is noteworthy that the participants begin to express sadness and anger about their eating experiences as they transition to FDK. In particular, two participants—participant LR and participant MH—describe feeling badly because they do not have enough time to eat at lunch time. Additionally, three participants—participant JB, participant KR and participant AH—describe their feelings about eating at school exclusively based on how much they like or dislike the items their parents or guardians have packed.

3.4.3 Phase 3

Phase three results demonstrate a full range of feelings among participants, with greater nuance and accuracy than phase two, most likely because participants were reporting on their current feelings and because they were more developmentally advanced. That said, there was a subset of participants who consistently provided the same responses. For these participants observational and interview data provided the basis for analysis. Five female participants—JB, BB, OB, ZR, and AH—never reported any negative feelings and one male participant—GH—

only ever reported feeling neutral. At the same time, the other 11 full-study participants demonstrated a clear ability to identify a range of feelings in the moment and were able to articulate how their current environment had impacted them. Looking exclusively at the in situ self-reported lunch time wellbeing of the 11 participants who most reliably reported their wellbeing demonstrates a clear downward trend (see Figure 2).

Figure 2: Lunchtime wellbeing P1 and P3.



Participants who reported being happy at lunch (including those who only ever reported positive feelings), for several reasons for their feelings. JB, MB and LB were happy because they got to go outside after lunch. Both EB and KR were happy about the contents of their lunches, and AH was happy “because of lunch”.⁹⁷ Both AR and NH reported feeling less well when hungry—‘kinda in the middle’ and ‘angry’, respectively—and ‘super happy’ once sat.

⁹⁷ This was on the second day of observation in this class which was supervised by the classroom teacher and which the teacher described as unusually calm.

It is noteworthy that participant RB, who was observed to adapt easily, demonstrated positive affect, and typically responded ‘super happy’ during wellbeing interviews, described feeling sad about not being allowed to talk during lunch at school. His childcare centre setting had had the most conversational lunch setting and he was able to describe how he also liked to have conversation at the dinner table with his family. His response demonstrated an acute sense of loss of the opportunity for mealtime socialization in the school setting which was echoed much more subtly by other participants.

Additionally, it is interesting that the participant in one of the two dangerous lunchrooms, ZR, was ‘super happy’ during lunch, whereas a participant in the most effective lunchroom with a lone staff person—participant LR in the NE class at the Raspberry School—was ‘super sad.’ ZR described being happy to be playing “push-push-chair”, the game where she and other children were moving furniture while their peers tried to eat and finding it funny when her pasta fell all over the floor, leaving only snacks and treats for her to eat. By contrast, LR described being ‘super sad’ because the staff member had eliminated free play time due to the dangerous behaviour of some of the students.

Discussion

This section outlines the best observed practices in the childcare centre and school eating environments based on study observations, staff reports and children’s experiences.

4.1 Phase 1

While all 3 childcare centre sites offered effective eating environments for the children, the setting at the Blueberry School was the most effective. The set-up, with a staff-member sitting with the children without interruption at a U-shaped table where each person had an assigned seat, enabled the attending staff member to use sequencing and modeling approaches to promote healthy eating habits while still allowing the children choice, the opportunity to serve themselves, and some structure to practice mealtime behaviour. These children ate a wider variety of nutritious foods at childcare centre than they did at home and almost unanimously reported feeling ‘super happy’ during lunch. Both observations and child assessments support the finding that this was the single most effective eating environment observed during the course of the study.

The Raspberry Childcare centre offered an effective eating environment, though because the staff were not eating with the children they were neither able to model mealtime behaviour nor be a part of the mealtime social setting. The children had a seating arrangement and were given some choice about how food was served to them, but the sequencing technique was not used. None of the children expressed dissatisfaction about mealtime.

Comparatively, the setting at the Huckleberry Childcare centre was the least effective of the childcare centre eating environments. Without a seating arrangement for all children, staff singled out those deemed to be ‘difficult’. They were separated from the other children, placing them at risk of experiencing social exclusion. Additionally, because this childcare centre did not have the same level of support staff as the other two childcare centres, the children received less attention to positive mealtime behaviours and did not benefit from sequencing or modeling approaches. On multiple occasions staff were observed telling children that they had to eat

specific, less favoured portions of their meal in order to receive preferred portions, an approach which has been linked to negative associations with food and reduced consumption of targeted foods (Bastell et.al. 2002; Galloway et.al. 2006; Ventura and Woroby 2013).

4.2 Phase 3

4.2.1 Lunch

Phase 3 assessed seating arrangements and staffing during the lunch hour. In six of the eight lunchrooms observed over the course of the study, seating arrangements were employed. Two trained lunchroom supervisors (in the north-west room at the Raspberry School and the lunchroom supervisor in the small, south-west room at the Huckleberry School on the first day of observation) and two untrained lunchroom supervisors (in the north-east room at the Raspberry School and in the east room at the Blueberry School) described that establishing a suitable seating arrangement had taken time and, ultimately, had helped to make the lunchroom dynamics more manageable. The untrained lunchroom supervisors in the rooms where children were observed to be at risk (the south-west room at the Raspberry School, the west room at the Blueberry School, and the north-west room at the Huckleberry School on the third and fourth observation days) did not volunteer to speak about either seating arrangements or the safety of the students in the lunch room. At the same time, the two lunch rooms without any seating arrangement (the north and east rooms at the Huckleberry School) were both safe and effective, though it is noteworthy that these rooms were staffed by a combination of an on duty early childhood educator and members of the regular teaching team who were donating their time.

It is possible that a well-devised seating arrangement could contribute to student safety, as was argued by the lunch time staff of the four effective rooms using seating arrangements, but results are inconclusive. Because the majority of the students in the classroom were not participants and, consequently, could not be observed as part of the study, it remains impossible to assess the quality of the seating arrangement implemented. Therefore, in the two rooms⁹⁸ with seating arrangements where risks were observed as a result of student interactions (the south-west room at the Raspberry School and the north-east room at the Huckleberry School on the third and fourth observation days), it cannot be determined whether this was as a result of poor seating arrangements or other factors.

At the same time, every room supervised by a trained adult was observed to be safe and those rooms supervised by multiple trained adults did not require a seating arrangement to achieve this. Thus, while the staff of four of the safe lunchrooms felt that they had achieved safety with a seating arrangement, seating arrangements proved to be an insufficient condition to ensure student safety in three of the kindergarten lunchrooms. By contrast, all lunch rooms supervised by staff trained in early childhood education (the north-west room at the Raspberry School, the north-west room at the Huckleberry School on the first day of observation, and the north and east rooms at the Huckleberry School) were safe, though, in cases where only one staff was present (as in the north-west room at the Raspberry School) the emphasis on having the children eat efficiently contributed to the participants' negative experiences at lunch time.

4.2.2 Snack

⁹⁸ In the third room where risks were observed (the West room at the Blueberry School), the risks were a result of the on-duty staff breaching the anaphylaxis policy and therefore bear no relevance to the question of seating arrangements.

In each of the three study schools snack was operated using a combination of a structured and a self-regulation approach. According to teacher reports, decisions about how to organize snack time were based on factors including scheduling (to coordinate with students going to gym, music, library or other classes), the amount of time children take to eat, and a desire to promote opportunities for self-regulation, as outlined in the Ontario Ministry of Education's Kindergarten Program (2010a; 2016). Three classrooms always used a self-regulation approach, offering snack as a station during centre time, (the north-west classroom at the Raspberry School and the north and north-west classrooms at the Huckleberry School) and one class room used this strategy all day on "days 2 and 4" of their 5-day class schedule (the east room at the Blueberry School). While some participants were able to effectively self-regulate using this model, challenges were observed. Participants in two of these class rooms ate a large snack during morning centre time, just before lunch and were not hungry during the lunch time. One of these children was observed to be disruptive and violent during lunch while the other complained of being hungry immediately after lunch. In the class where the self-regulation approach was only employed two days a cycle, participants were observed to be too distracted to eat during centre time. There was one room where the exclusive use of a centre time approach appeared to be effective on observation days (the north-west room at the Raspberry School), though in this and another room (the north-west room at the Huckleberry School) non-participants were observed late in the day reporting to the teaching staff that they were hungry after the snack station had been closed.

The use of a structured approach all day was observed four times (one of the observation days in the east classroom at the Blueberry School, one of the observation days in the north-east

classroom at the Raspberry School, the one observation days in the south west-class at the Raspberry School, and the one observation day in the east classroom at the Huckleberry School). In the first two cases, the school snack was offered in the morning and the children snacked from their packed lunches in the afternoon. In the third case, the order was reversed and in the fourth case students ate from their lunches in both the morning and afternoon because there was no snack program available. The use of a structured approach for both morning and afternoon was effective and gave children the opportunity to have a shared mealtime with the supervision of their regular teaching staff, though it did not generate opportunities for children to develop self-regulation with respect to food in the school setting.

Finally, the use of a structured approach in the morning and a self-regulation approach in the afternoon was observed in two classrooms (on one observation day in the north-east classroom at the Raspberry School and on all three observation days in the west classroom at the Blueberry School). On all four observation days with this model, students were observed enjoying the opportunity for a shared meal time with their peers during the structured morning snack time. In the afternoons, the children employed a self-regulation approach to snack time. It was noted that at the beginning, middle and multiple times near the end of the snack station, teaching staff reminded the class that it was available for anyone who was hungry. While only a portion of students chose to attend the snack station, no complaints of hunger were observed at the end of the day in these two classrooms.

The use of a self-regulation approach to both morning and afternoon snack was challenging for some children in this study and resulted in the loss of an opportunity for a shared mealtime, while the exclusive use of a structured approach was effective but resulted in the loss

of opportunity to develop self-regulation. Within the models observed in this study, the structured approach in morning and a self-regulation approach in the afternoon was the most effective and provided the children with the opportunity to both enjoy a shared meal in the morning and to develop self-regulation in the afternoon.

Self-reported Wellbeing

Whereas child participant's self-reported wellbeing in the child care eating environment was overwhelmingly positive, participants reported a wider array of feelings in the kindergarten eating environment. In fact, more than half of the 11 participants who demonstrated a clear ability to identify a range of feelings reported negative feelings during school lunch, while some of the participants who reported positive feelings during lunch were happy because they were looking forward to going outside after lunch and another reported feeling happy to be playing a game moving the chairs her peers were sitting on to eat lunch (preventing many children from actually eating). Only three participants reported positive feelings about lunch in the kindergarten setting, though one of these participants (as outlined in the section on choice in the Perceptions of the Kindergarten Eating Environment findings section) also described feeling sad about the nutritious food her mother packed in her lunch. Overall, participants reported a notable decline in wellbeing from the eating environment in the childcare setting to the eating environment in the school setting.

The use of a self-regulation approach to both morning and afternoon snack was challenging for some children in this study and resulted in the loss of an opportunity for a shared mealtime, while the exclusive use of a structured approach was effective but resulted in the loss

of opportunity to develop self-regulation. Within the models observed in this study, the structured approach in morning and a self-regulation approach in the afternoon was the most effective and provided the children with the opportunity to both enjoy a shared meal in the morning and to develop self-regulation in the afternoon.

Conclusion

Throughout the study child participants clearly conveyed that they like to eat and that they enjoy the opportunity to eat in a social setting with their peers. In the childcare centre setting, participants' self-reported wellbeing at mealtimes was overwhelmingly positive. Consistent with the literature on positive mealtime environments for children ages three to six years old (Mita, Gray, Goodell, 2015; Fletcher, Branen, Price & Matthews, 2005), results in the childcare centre setting suggest that children value and benefit from the opportunity to have this shared meal along with their caregivers in a family-style meal setting, as is the case in the Blueberry Childcare centre. Once children entered the FDK program, their self-reported responses began to reflect negative experiences and researcher observations included the emergence of physical risks during the lunch time. While seating arrangements were employed in four of the effective settings, they were also employed in the settings where risks were observed. Furthermore, no seating arrangements were used in two of the effective school lunch settings. Seating arrangements may be a component of effective lunch rooms, but staffing—the level of staff training, the relationship of the staff to the children, and the staff-to-student ratio—emerges as the more relevant factor. At school snack time, both structured and self-regulation approaches were employed in various combinations. One model observed in two classes in the study, a structured snack time in the morning and a self-regulation approach in the afternoon,

appears to both address the challenges faced by some students and offer children the opportunity to benefit from the strengths of each model.

Relative to the childcare centre eating environments, school eating environments are fiscally constrained. In fact, the website of one of the study schools requests a voluntary contribution to support lunch hour staffing. In the childcare centre setting children benefit from detailed regulations and financial support which guarantee low staff-to-child ratios, the constant presence of familiar trained staff and the provision of food that meets formal nutrition standards. There are no similar regulations for the school setting and, as a result, this study finds that the school eating environment does not provide a similar level of support for young children. At the ages of 3 and 4 years old, the children in this study began to report negative feelings at meal time following the transition to full day kindergarten and teachers, ECEs and untrained lunch time staff all expressed concern for the wellbeing of the children during the lunch hour. It is worth noting, however, that the regulatory framework for childcare settings has evolved over decades and the FDK program is in its nascent stages. It is apparent that the policy with regards to the lunch hour in the full day kindergarten program has room to grow. Going forward, efforts to develop a stronger regulatory framework in order to align the kindergarten eating environment with the childcare centre eating environment would have a positive impact on child wellbeing.

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Compliance with ethical standards:

This study was approved by both the "Human Participants Review Sub-Committee" at York University (April 3, 2014) and the "External Research Review Committee" at the Toronto District School Board (Nov 27, 2014).

Informed consent was obtained from the parents of all child participants and all key actors. In addition, all child participants gave verbal assent at each phase.

Informed consent was obtained from all key informants in this study. Additional consent was obtained from all informants for whom identifying information is included in this article.

There are no known potential conflicts of interest.

Manuscript 2: Perceptions of the Kindergarten Eating Environment

Abstract:

Research has demonstrated that “the creation of a positive mealtime environment can positively influence healthy eating habits in children” (Mita, Gray & Goodell, 2015, p. 38). While Ontario, Canada childcare regulations support the creation of these types of eating environments, the new full day kindergarten (FDK) program has no explicit comparable supports. This study uses participatory research methods to assess the impacts of eating environments on the wellbeing of children transitioning from full day childcare to full day kindergarten in the Toronto District School Board (TDSB). Findings indicate that both parents and staff are concerned about the kindergarten eating environment while children find that time, socialization and choice are important.

Research has demonstrated that “the creation of a positive mealtime environment can positively influence healthy eating habits in children” (Mita, Gray & Goodell, 2015, p. 38). As a result of this kind of research, the Childcare Research and Resource Unit of Childcare Canada advocates the use of a “family-style meal” or “pedagogical meal” to offer young children both nutritional and language opportunities, along with a chance to “develop table manners, attitudes towards food, self-esteem, independence and learn cultural norms.” (2011, p.1) With the onset of full day kindergarten (FDK) in Ontario, children who might previously have been in full day childcare are now in full day kindergarten. This study explores the impact of school food and school eating environments on the wellbeing of children transitioning from full-day daycare to full-day kindergarten in three daycare-school pairings in the Toronto District School Board (TDSB) and this paper focuses on parent, teacher and child perceptions of the kindergarten eating environment.

The Full Day Kindergarten (FDK) program in Ontario was implemented gradually over a five-year period from 2010-2011 to 2014-2015. The program was designed drawing on Pascal’s (2009) comprehensive plan of action, “With Our Best Future in Mind: Implementing Early

Learning in Ontario” (commonly referred to as “Our Best Future”), commissioned by then-Premier, Dalton McGuinty. The Ontario Ministry of Education draft curriculum for the first year of the rollout describes FDK as “a child centred, developmentally appropriate, integrated, extended-day program of learning for four- and five-year-old children. The purpose was to establish a strong foundation for learning in the early years, and to do so in a safe and caring play-based environment that promotes the physical, social, emotional, and cognitive development of all children.” (2010)

Prior to the FDK implementation, three-to-five year-olds in full day care in Ontario were covered under Ontario’s Day Nurseries Act (DNA). Enacted in 1946, Ontario’s DNA was Canada’s first provincial legislation specifically intended for child care. Over the course of nearly 7 decades, the DNA evolved and integrated into the regulatory requirements an understanding of children’s developmental needs. While still in place at the time of this study, the DNA was replaced effective August 31, 2015 by the Child Care and Early Years Act (CCEYA). The DNA included age-specific criteria in all relevant areas, including eating and nutrition and its successor, the CCEYA, has retained these policies and now also includes regulations pertaining to allergies, special dietary needs, special feeding arrangements and “Eating Well with Canada’s Food Guide—First Nations, Inuit & Metis.” In contrast, there are no age-specific regulations for food and nutrition in the Ministry of Education’s School Food and Beverage Policy (PPM 150: School Food and Beverage Policy) which regulates food sold on school premises and there are no regulations whatsoever regarding the school eating environment.

The lack of policy when children as young as 3 years and 8 months are introduced to the school system appears to be an important policy gap. This gap is particularly pressing in the case of very young children who have just recently entered full day schooling and have unique developmental needs. It raises the question whether the structuring of food and eating environments in the FDK program is dependent on trial, error and the discretion of individual school principals because principals are not required to have training in the developmental stages of very young children. This means that efficacy depends on how much individual principals are able to learn about early childhood (McCuaig, personal communication, May 6, 2015). Quite simply, faced with a lack of broad policy, decisions regarding the needs of the very young are left to busy people who may not have any direct experience in early childhood education.

Methodology

This study was conducted in the fifth year of the FDK rollout, 2014-15. In an effort to include daycare/school pairings that were as comparable as possible, site selection was based on a range of criteria—location, childcare centre rating, school rating and demographics (see Figure 1: selection criteria). Three, of a possible five, daycare/school combinations agreed to participate. Within each site, only children attending the daycare on a full-time basis and intending to attend the FDK program at the same school were eligible to participate. Participation rates were 72.72% at the Blueberry Daycare, 62.5% at the Raspberry Daycare and 100% at the Huckleberry Daycare. The study ended up with a total of 21 participants—17 for the full year and 4 who participated in one or two thirds of the study.

Figure 1: Selection criteria (2014 statistics)

	Preschool room quality rating	Fraser Institute school rating	TDSB LOI	Average parental income
Blueberry	3.51/5	7/10	224	\$41,000
Huckleberry	3.68/5	7.2/10	394	\$72,000
Raspberry	3.78/5	7.2/10	324	\$53,400

A critical element is treating children as true participants and respecting their voices. Drawing on the Mosaic Approach to participatory research with pre-school aged children (Clark and Moss 2001), I observed child participants in their daycare, after school care and school settings over the course of 2014-2015 and offered a variety of ways to recount and express their experiences of eating in each setting. These first-hand accounts by child participants were supplemented with field observations, parent surveys and interviews with key actors in the field. That said, in keeping with the notion that children are “competent social actors, the ‘experts in their own lives’, and [are] therefore valid sources of data” (Crivello et al 2009), the first-hand experiences form the foundation of my findings. This age group is sorely underrepresented in the literature even though “studies directly involving children have yielded just as good response rates and reliability (and sometimes even better) as studies using adults to report on children’s well-being.” (Ben-Arieh 2005) In fact, “both the UN Convention of the Rights of the Child and current thinking about participatory research and consultation suggest researchers should seek to maximize opportunities for children’s input at each stage.” (Hill 2005) Ontario has established a new approach to early learning and this research holds the promise of invaluable insights to improve the experiences of those meant to benefit from FDK.

Study design

The study was conducted in three phases. In Phase 1, through the spring and summer of 2014, full day observations were taken in the childcare setting with detailed note taking for 5 of every 15 minutes. In addition, once every 90 minutes, participants were asked to situate themselves on an age-appropriate wellbeing chart consisting of 5 faces, were invited to draw a picture relating to eating in the childcare setting and had a short semi-structured interview at the end of the day. During Phase 1, the parents or guardians of the participants were asked to complete a short survey including both demographic information and questions regarding their child's eating habits. In Phase 2, participants were interviewed twice—once in September and once in October 2014—about their experience of transitioning to kindergarten and were asked to situate on the wellbeing chart used in Phase 1 their eating experiences at school. These interviews were conducted in the aftercare setting which, for many participants, was also their daytime classroom. Phase 3, much like Phase 1, consisted of full-day observations, this time in the classroom setting. Between January and June of 2015, participants were both observed and interviewed as they situated themselves on the wellbeing charts once every 90 minutes.

Figure 2: Wellbeing chart



Super happy/WB5; Happy/WB4; Neutral/WB3; Sad/WB2; Super sad or angry/WB1

Additionally, 18 key actor interviews provided further context and analysis and enabled triangulation of findings. These included interviews with early childhood policy analysts, special needs specialists, kindergarten teachers from both study sites and other TDSB schools, the cook from the one daycare in the study with an onsite cook, early childhood educators and one parent.

Beyond this, the study findings are corroborated through dozens of informal, unstructured parent and teacher interviews conducted 2012 to 2016.

Analytic framework

The lack of age-specific school food policy is evaluated based on its impacts on child wellbeing. Here, wellbeing is articulated according to a model I developed primarily based on Amartya Sen’s Capabilities Approach⁹⁹ (1999), Diener and Seligman’s work on wellbeing¹⁰⁰ (2004) and Martin Seligman’s work on flourishing¹⁰¹ (2011). My model for wellbeing offers three domains—material security, engagement and relationship—with meaning at the core, underlying each domain (Figure 1).¹⁰²

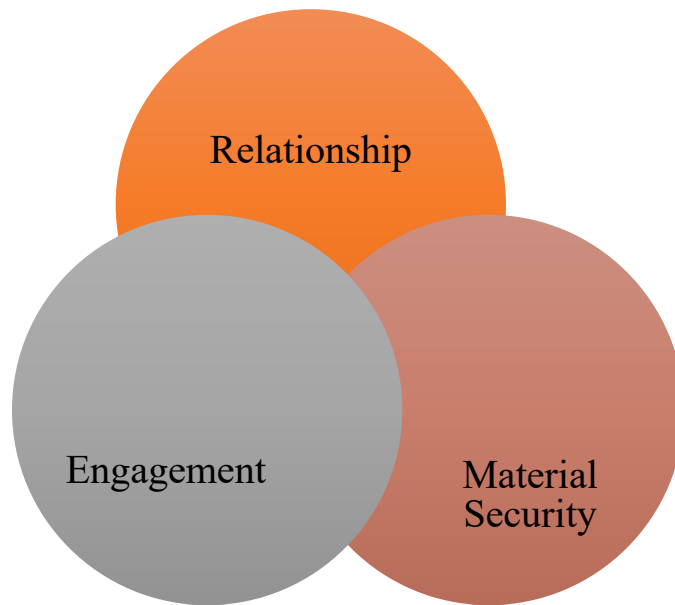
Figure 4: Wellbeing model

⁹⁹ In “Development as Freedom” (1999), Nobel Laureate Amartya Sen builds on Aristotle’s understanding of human flourishing arguing that “development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy” (14). Sen outlines that an emphasis on human capability, rather than human capital, leads to “the expansion of human freedom to live the kind of lives that people have reason to value” (295). Ultimately Sen posits that a person’s ability to lead a good life is based on valued beings and doings, such as being healthy and having loving relationships, and this Capabilities Approach contributes to a new set of social indicators, including the United Nations Human Development Index which embodies this approach to wellbeing.

¹⁰⁰ Similarly, in “Beyond Money: Toward an Economy of Wellbeing” (2004), Diener and Seligman argue that “wellbeing should become a primary focus of policy makers” because, once basic needs are met, social relationships and work satisfaction emerge as key indicators for wellbeing which, in turn, produces positive outcomes like improved work performance and good health.

¹⁰¹ More recently, in “Flourish” (2011), Seligman outlines five elements of wellbeing—positive emotion, engagement, relationship, meaning and accomplishment (13-29).

¹⁰² Because my model is eudaimonic (focusing on meaning and self-realization to evaluate functioning), not hedonic (focusing on feeling pleasure), positive emotion, or affect, is not among the domains.



These domains align with existing assessment categories for school food (Brown et al 2008), Konu and Rimpela’s (2002) conceptual model for wellbeing in schools, and the Ontario Ministry of Education’s (2011) student wellbeing research framework. This paper focuses on the engagement domain assessing both overall wellbeing impacts of the eating environment and the potential for the eating environment to contribute to children developing positive relationships with food.

Figure 5: Alignment with relevant models

My model for wellbeing	Assessment categories for school food	Conceptual model for wellbeing in schools	Student Well-being Research Framework
Material security	Health related benefits	School conditions & health	Physical
Engagement	Cognitive and educational benefits	Means for self-fulfillment	Cognitive
Relationship	Behaviour and psychosocial benefits	Social relationships	Psychosocial

Findings

The lunch time in all participating childcare centres was calm and effective. In all three centres, the children sat at tables with two to eight children. At two of the sites (the Blueberry Childcare Center and the Raspberry Childcare Centre), each table was attended by the same staff member throughout the meal while other staff members brought or served the food, resulting in staffing ratios of one staff member to four or less children. By regulation, these staff members were trained early childhood educators (ECEs) and the foods served met nutritional guidelines. These rooms were calm, the children engaged in conversation with the guidance of their ECEs and, in many cases¹⁰³, the children would eat a wider variety of healthy foods in the daycare setting than at home.

In the school setting, there are neither guidelines for staff-to-student ratios nor minimum qualifications for lunch supervisors¹⁰⁴. Class sizes in the eight classrooms of the study ranged from 24 to 36 children and during the lunch hour there is only ever one on-duty adult supervising. Given the extremely young age of the children in the kindergarten classrooms, most children required assistance with opening containers and some also required assistance with toileting. Even in cases where there were no incidents—spills, toileting accidents, disagreements, aggressive outbursts, trips or falls—there was more work than one adult could possibly do. In many cases the lunchrooms were loud, messy and chaotic—not conducive to a calm eating experience. Key actors interviewed expressed that there were a variety of safety concerns with respect to the kindergarten eating environment. In the kindergarten setting, child participants were keenly aware of the issues of time, socialization and choice. Observations demonstrated the

¹⁰³ Six of 13 respondents to the parent/guardian survey felt that the participating child was “less picky” in the childcare setting. Observations, participant interviews and informal parent interviews suggest that a higher proportion of children eat a wider variety of foods in the childcare centre.

¹⁰⁴ Applicants must demonstrate that they have no criminal record but are not required to have training or experience.

importance of mealtime modeling in the childcare setting, classroom teachers expressed concern regarding the content of student's lunches and respondents to the parent survey expressed a range of concerns regarding the kindergarten eating environment.

Parent¹⁰⁵ perceptions.

Parents' interest in, and understanding of, each of the eating environments varied. In Ontario, childcare settings that provide a nutrition program (as did each of the sites in this study) must comply with nutritional standards, post the menu in an area of high visibility and record each child's food consumption. As a result, parents and caregivers have access to extensive information regarding their child's consumption in the childcare eating environment. By contrast, there is no similar regulation in the school eating environment, children's consumption is not monitored or recorded, and parents and guardians have little or no information regarding the lunch period.

As part of the parent survey completed during Phase 1, parents of 13 participants responded to questions regarding their children's eating habits at home, their understanding of their children's eating habits in the childcare centre and their expectations regarding their children's eating habits in the kindergarten eating environment. With respect to the childcare setting, seven of the 13 respondents felt that their children ate differently in the childcare setting—six felt that their children were less picky and ate a wider variety of foods and one noted that “at home I know what she eats.” Observations in the childcare setting, evaluated against parent survey responses to their child's eating habits and child participant interview responses,

¹⁰⁵ All children in this study were cared for by parents, therefore the study refers to “parents” rather than “parents and guardians”.

demonstrated that more than half of the study participants ate a wider variety of foods in the childcare setting than they did at home.

In response to open ended questions relating to the school eating environments, parent respondents expressed a number of concerns. Five respondents conveyed that they expected their children not to eat as well in the school. One parent explained,

“I think it is highly likely she will not eat as well as she did in the daycare setting” (mother of LR).

Three respondents worried that their children would not have enough assistance and support with eating, while another two worried about mealtime supervision. One parent linked these concerns,

“JoH eats best when supervised more closely. Now that he will be eating a packed lunch, I worry whether he will eat as well as he did in daycare.” (JoH’s mother)

One parent expressed hope that the lunch room would be a “calm setting” and another two parents worried that the children would not have enough time to eat. One of these parents, who also has older children in the school system, noted,

“She gets distracted. Concerned about such a young age group being put in a lunchroom environment with so many other children and only having a small amount of time to eat before being sent to play.

“Have a child going from grade 1 to grade 2. Lunchroom environment has been an issue. Not eating because ‘not enough time’ and ‘wants to play’ has been a concern. With ZR being so much younger, I am really worried.” (mother of ZR)

Additionally, two respondents expressed concern about packed lunches, one noting,

“It’s going to be a big deal for me to learn to pack snacks and lunches and take more time and energy I feel short on” (mother of KR)—

and another two wished that their children could continue the lunch program offered through the childcare centre,

“Ideal would be if daycare continued the lunch program [in kindergarten]” (mother of LR)

One parent summarized it succinctly explaining,

“Honestly, food is the only thing I’m anxious about with MB starting kindergarten—packing a healthy variety, containers you can open—you know, we never had to worry about this before because it was half day.” (mother of MB)

These responses are consistent with early childhood policy fellow Kerry McCuaig's¹⁰⁶ observations that, in focus groups, polling and one-on-one interviews with parents, food is parents' number one complaint (K. McCuaig, personal communication, May 6, 2015). In an interview McCuaig explained that in her work across the province of Ontario parents of kindergarten aged children, like the parents in this study, raised concerns about the quality of food during snack programs, rushed eating at lunch time, the quality of lunchtime monitoring, transitions during the lunch break and restrictions on socialization during the lunch time.

Staff perceptions in the school setting.

During Phase 3, teachers, ECEs and lunchroom supervisors were eager to share their perceptions and concerns. Teachers at both the Raspberry and Huckleberry Schools conveyed their belief that children are not ready for full day schooling in junior kindergarten¹⁰⁷. Lunch was a particular concern with one teacher explaining that “lunch is just too chaotic. It’s too much for the children, juniors are just too young!” Another argued that “they should all go home for lunch,” describing that space, total number of children and staffing ratios are significant issues. Additionally, teachers at all three schools expressed concern regarding the quality of food the children bring in their lunches. Most poignantly, one teacher described a firm belief that there is a correlation between the quality of the lunch and behavioural issues, claiming “all I have to do is look at the lunch, and I know how they will do in terms of behaviour and school performance.”

¹⁰⁶ Kerry McCuaig is the Atkinson Centre for Child Development early childhood policy fellow at the Ontario Institute for Studies in Education (OISE) and co-author of the Early Years Study 3 (2011).

¹⁰⁷ In Ontario, Canada children are 3 to 4 years old while they are in junior kindergarten.

ECEs in both the classroom and the lunchroom at each of the three sites expressed concern for the staffing ratios during the lunchtime. The lunchroom ECE in the north-east room at the Raspberry School described frustration at not being able to properly implement their training as the only adult present during the lunch time. The classroom ECEs in the west room at the Blueberry School and both classroom ECEs in the single-participant rooms at the Huckleberry School gave up their lunch break expressly because of concerns for the safety of the children. Additionally, at the Blueberry School there was a student-teacher who was also a former ECE who outlined concerns regarding both the lack of regulation of the amount of space per child in the kindergarten environment and the lack of ‘continuity of care’. None of the staff present with the children throughout the day were present during their main meal. This student-teacher explained that, as a childcare centre ECE working with 3-4 year olds, the staff closely tracked what children ate and how well they slept to better anticipate their behaviour throughout the day.

Some untrained lunch supervisors also expressed safety concerns. In the east room at the Blueberry School and the north-west room at the Raspberry School, the untrained lunch supervisors were eager to share their concern at not having received any training and their belief that the children require more support during the lunch time. Interestingly, only the staff of the two lunchrooms that were, in fact, chaotic and dangerous—the south-west room at the Raspberry School and the small classroom at the Huckleberry school on the final two observation days—did not express concern regarding the wellbeing and safety of the children during the lunch time.

Children’s experiences.

Children’s experiences of eating in the childcare setting were quite different from their experiences in the school setting. Child participants reported positive feelings about their lunch experiences in the childcare setting. Of the six participants who were developmentally able to understand and respond to the question, “do you like to eat at daycare?” during Phase 1¹⁰⁸, five reported that they like to eat in the childcare¹⁰⁹ setting while one noted that they preferred to eat at home. One participant exclaimed, “I happy eating lunch!” and other participants ate with great enthusiasm in the childcare setting, especially when compared with observations from Phase 3 in the school eating environment. Four of the participants who did not directly respond to questions about eating at “daycare” were observed asking for second, third and, even, fourth servings of lunch while they were at their childcare centre. Thus, five out of six participants offered enthusiastic responses, participants generally ate more enthusiastically in the childcare setting than they did in the school eating environment and four of the eleven participants who did not directly verbally respond demonstrated enthusiastic eating. Additionally, child participant’s self-reported wellbeing during lunch was almost unanimously positive. (The one negative response, WB1, came from a child who was crying for their mother throughout that day and the one neutral response, WB3, came from a child who only ever responded WB3 in all three phases of the study. Neither of these responses can be attributed to the eating environment.) Child participants clearly demonstrated positive wellbeing in the childcare setting through their words and eating.

¹⁰⁸ Because of the very young age of the participants, their ability to understand and respond to interview questions evolved significantly over the course of the year-long study. During Phase 1 all participants were able to discuss food likes and dislikes, but many had a hard time thinking about where they had eaten and some were even unable to recall what they had just eaten. By Phase 2 most participants were able to speak about eating at lunch earlier the same day. In Phase 3 participants were interviewed while they were actually eating.

¹⁰⁹ The term “childcare centre” is the preferred terminology among early childcare researchers and policy makers, but the term “daycare” is the term that the children used. As a result, the term “daycare” appears in quoted dialogue with child participants, whereas the term “childcare setting” or “childcare centre” is used in all other cases.

In the school setting, by contrast, child participants expressed a variety of positive and negative feelings during the lunch time. Children's interests and concerns regarding eating in the kindergarten setting were focused in three areas: time, socialization and choice.

Time.

The challenge most consistently observed and reported by child participants in the kindergarten lunch hour setting was insufficient time to eat. I observed that, with the exception of extreme weather days that kept children inside, kindergarten children were given 20-25 minutes to eat their lunches. On those observed extreme weather days, 10 to 15 per cent of the students took well over 45 minutes to eat their lunches even when activities for play had been set up 30 minutes into the eating time¹¹⁰. While most staff were under the impression that lunchtime challenges, like difficulties with containers, were resolved by the December holiday break, children in every classroom at every school in the study continued to seek assistance opening containers in Phase 3, January to June. Beyond the challenges of accessing their food, the children simply required more time to eat. Not one of the nine full-study female participants was ever observed to eat all their lunch. In fact, female participants rarely ate as much as half their lunch and six of the nine female participants independently raised the problem of not having enough time to eat. The male participants also had trouble finishing their lunch—of the eight full-study male participants, only one was ever observed to finish his lunch in the school setting—though the boys were less able to independently identify the reason. One female participant at the Blueberry School stated simply, “I didn't have time to eat it,” and a female participant at the Raspberry School explained:

¹¹⁰ ECEs noted that when activities are available, some children may not have the self-regulation to eat until sated and will choose to play instead.

L: I eated. I wanna eat everything...but every sometimes I, I can't eat anything, um everything 'cause some of, 'cause they say it's tidy up time for the lunch.

JAB: Yeah, so sometimes it's not enough time to get everything eaten, even though you want to?

L: Yeah...

JAB: It's not enough time?

L: Never, never it's enough time.

JAB: So how does that make you feel?

L: ...this sad. [indicates sad/2WB on the wellbeing chart]

JAB: This sad, a little bit sad?

L: And we're, when I get ta, get to happier, I get the, when I'm happy I get to eat all of my things it's this one. [indicates happy/4WB on the wellbeing chart]

JAB: Right. Do you sometimes get enough time to eat everything?

L: [shakes head no]

JAB: Never?

L: Never.

And a male participant at the Blueberry school explains that he eats his “favourite things” first (treats) and “when I am gonna eat the thing I don't like [the ‘main meal’], it is time for us to put away our lunch.” Children expressed anxiety about not “finishing” their lunches. Parents of study participants and from informal interviews said that over the course of the kindergarten year they amend the content of their children's lunches to include increasing proportions of convenience foods due to growing concerned about whether or not their child is eating enough at school. And, teachers, class room ECEs and after school care staff describe working to structure additional opportunities for children to eat their lunches later in the day. Some children confided that “by the end of the day” they can eat all their lunch. Nevertheless, caregivers and other

interviewees repeatedly expressed frustration and, in some cases, anger that these very young children are given so little time to eat with little or no guidance during the meal time.

Socialization.

During lunch in the kindergarten classroom, children have time to socialize with little guidance because there is one adult supervising 24 to 33 three-to-five-year-olds. Both lunchroom and teaching staff report that the girls are “often very conversational” and identify this as a problem because they converse in lieu of eating. As a strategy to limit these conversations, one LS ECE establishes a seating plan that alternates girls and boys, while in many other rooms specific girls are separated from one another. While study observations do support staff reports that girls, in particular, find that there is not enough time to eat, teaching children that mealtime is a time to eat and not socialize is not an optimal approach. In fact, a male participant noted feeling sad about not being allowed to talk at lunch.

JAB: Now that it's lunchtime, how are you feeling?

R: ... ummm... ummm... [makes a sad face, indicates super sad/1WB]

JAB: Super sad?

R: 'naqui' [indicates sad/2WB on WB chart]

JAB: A little bit sad? Why are you feeling a little bit sad?

R: Because we can't talk at lunchtime.

JAB: You're not allowed to talk at lunchtime and that makes you feel sad?

R: [nods yes]

JAB: Do you like it when you eat at the dinner table? Do you talk at the dinner table at home?

R: Yeah.

JAB: Yeah, is that one of the things you like about that?

R: [nods yes]

JAB: But you're not supposed to do that here at school... and now here I am talking to you at the lunch table.

R: [giggles]

JAB: So you feel a little bit sad or a lot sad? At first you said a lot sad, then you said a little bit sad.

R: [indicates sad/2WB]

JAB: Just a little bit sad.

R: Yup.

Due to the time constraints of the school lunch time, conversation is a problem to eradicate to facilitate efficient eating. Children experience this as a loss and it represents a lost opportunity for mealtime socialization among peers.

Choice.

Child participants consistently valued the choices they have over what they eat over the course of the school day. Through the study, all child participants (both the 17 who participated for the full year and the four who participated in one or two phases) demonstrated a clear sense of their food likes and dislikes and a desire to have their eating preferences respected, whether at home, in the daycare setting or in the school setting. During Phase 2 (P2) and Phase 3 (P3), eight of the 17 full-study participants independently indicated that they were either “happy” (WB4) or “super happy” (WB5) because they got to choose some of the items in their lunches. One participant at the Raspberry School exclaimed, “I really like when I choose,” and another, at the

Huckleberry school explained that they like bringing lunch from home “because it tastes better!”¹¹¹ When asked, all participants confirmed the preference for having choice.

Many participants like their brown bag lunches because their parents pack candy, cookies and other treats that were not available to them in the daycare setting. A subset of 3 participants described as “behavioural” by the teaching staff commented consistently about candy and chocolate in their P2 and P3 interviews. One participant at the Huckleberry School described themselves as “angry before lunch because I wanted to eat everything” and, later, “happy at lunch because I love candy.” Furthermore, the child participants’ delight at having choice is sometimes accompanied by feelings of sadness or anger when parents pack items that the child does not prefer. For example:

JAB: Okay, so when you think about eating lunch at school, how do you feel?

K: Sad, sad and happy, happy.

JAB: How come sad and how come happy?

K: It’s because sometimes my mom puts things that I really like and some things that I kinda do like and some things I don’t like really much and sometimes things that I don’t like a little bit.

JAB: So which things in your lunch make you sad, sad?

K: When my mom packs me bad things.

JAB: Bad things like what?

K: That are poisonous.

JAB: Hm. Your mom packs you poisonous things, does she?

K: Sometimes. But I put them back in my lunch basket until... when I get home I tell her.

JAB: Like what? Do you remember any of the things?

¹¹¹ Child participants suggested that foods they had chosen themselves tastes better.

K: Poison in... bags that are filled with poison all out.

This particular child was described by the mother as “a picky eater” and, in the conversation above she is talking about her egg-salad sandwich. In the childcare setting, however, with an adult role model eating with the children and peers all eating the nutritious foods offered, this child ate a wider range of foods than at home. Once in school, the parents started the year sending sandwiches, veggies and fruits that would all come home uneaten. By full day observation day in January, the child came to school with a lunch consisting of cheese strings, sweetened yogurt, chocolate cookies, apple slices and lemonade—the child ate neither the cheese nor yogurt and informed me that she would tell her mother that she doesn’t like them. Five of the 17 full study participants demonstrated a similar trajectory of shifting eating habits from fresh foods towards nutrient-poor, calorie-dense food over the course of the transition from childcare to FDK. While children value choice in their consumption habits, the lack of support in the school eating environment has been observed to reduce the quality of food in packed lunches. It seems that, while child participants value choice, these young children require structure and modeling of healthy choices.

Mealtime modeling and nutrition education.

While the DNA and its successor, the CCEYA, set out parameters to ensure that the daycare eating environment provides mealtime modeling by trained adults of food that meets nutritional standards, the school eating environment offers nothing comparable. In the childcare setting, children sit in small groups with nutritious foods offered employing a technique referred to as “sequencing” [as described in Section 3.2 Site, Setting and Self-Reported Wellbeing]. First, when children are most hungry, an array of fresh vegetables are offered, then a main course of

starch and protein is offered, and finally fresh fruit. At each stage, children have choice about what they take and can serve themselves. Additionally, at the Blueberry Childcare Centre, staff ate the meal with the children, modeling mealtime behaviour and guiding quiet conversation using the “family-style mealtime” preferred in the literature (Mita, Gray, Goodell, 2015, p. 41; Fletcher, Branen, Price & Matthews, 2005). In all cases, staff were observed communicating with children about healthy foods while eating meals that met the nutrition guidelines set out in the provincial policy. Findings support the relative efficacy of the models employed in the childcare centres of this study.

By contrast, there are few, if any, opportunities for mealtime modeling and nutrition education in the kindergarten setting. Both classroom teachers and classroom ECEs are on break during the lunch hour, which is not considered instructional time by the Ontario Ministry of Education. Among the observed classrooms with a structured snack program, none of the supervising staff participated in the snack. Additionally, every one of the kindergarten teachers interviewed expressed concern over the quality of food the children bring in their lunches and many expressed anxiety regarding how to encourage better choices. One teacher at the Raspberry School described sending a letter home to parents at the start of the school year encouraging them to “send healthier food,” but felt that this approach was minimally effective. Another teacher at the Huckleberry School teaches nutrition to the students by making collages of healthy versus unhealthy foods in the early part of the school year and feels that this approach is effective because “the kids tell the parents they want healthier foods”. As outlined above, however, parents and guardians sometimes send lower quality foods because they worry their children are not eating enough at school. It is clear, that the transition from childcare to school involved a loss of opportunity for mealtime modeling and in-situ nutrition education.

Discussion

Among adults contributing to the study, the common thread was concern regarding the kindergarten eating environment. While in the parent survey, most reported that they believed that their children either ate the same in the child care setting as they did at home (six of 13 respondents) or that they ate a wider variety of foods at the child care centre than they did at home (six of 13 respondents)¹¹², expectations for the kindergarten eating environment were quite different. Parents expressed concerns about whether or not their children would eat in the school environment, citing reasons including children becoming distracted, insufficient supervision and the inability to open lunch containers. Staff in the school setting were also concerned about the lunchtime environment. Kindergarten teachers went so far as to suggest that junior kindergarten children are simply too young for full day schooling and that kindergarten children should go home for lunch, a sentiment echoed by teachers throughout the study. Early childhood educators (ECEs) raised concerns about the inability to implement their training due to inadequate ratios during the lunch time, child safety and the importance of continuity of care. Similarly, some of the untrained lunchroom supervisors expressed safety concerns and a desire for both training and better staff-to-student ratios. Notably, it was only the staff in the rooms where safety risks were observed who did not express any concerns whatsoever. With few exceptions, adults in the study perceived the kindergarten eating environment as problematic.

¹¹² The other parent simply noted, “at home I know what she eats.”

Child participants expressed some concern about the kindergarten eating environment and pleasure in some concerning dietary trends, like increased access to convenience foods and treats. In response to open ended questions about their lunchtime experience, participants identified three central themes: time, socialization and choice. Six of the nine female participants independently raised not having enough time to eat, all of the participants were observed facing the same issue and (among those who responded to the question) confirmed that it was a problem. This challenge had significant impacts on the eating environment as lunch supervisors separated talking children and focused on trying to get the children to eat efficiently, while parents sent higher proportions of convenience foods over the course of the year in the hopes that their children would eat. The children, who had enjoyed supported mealtime conversation in the childcare setting, experienced eating without talking as a loss. On the other hand, while children reported positive feelings about being able to choose some of the items in their lunches, many children identified that they were happy to receive treats, snacks and other nutrient-poor, calorie-rich items in their packed lunches. In the absence of the mealtime supports available in the childcare setting, children experienced a deterioration of their lunch time meal environment.

Study findings suggest that, when compared to the childcare eating environment, the kindergarten eating environment is subpar. Consistent with the literature on positive mealtime environments for children three to six years old (Mita, Gray, Goodell, 2015; Fletcher, Branen, Price & Matthews, 2005), results in the childcare centre setting suggest that children value and benefit from the opportunity to have this shared meal along with their caregivers in a family-style meal setting, as is the case in the Blueberry Childcare centre. By contrast, practice in the kindergarten eating environments observed in this study would be classified as inadequate practice in the BMER inventory (Fletcher, Branen, Price & Matthews, 2005). In “Our Best

Future” Pascal (2009) clearly outlined the expectation that “the schedules of the [two classroom] ECEs should overlap during the children’s lunch period to allow lunch breaks for the staff while *maintaining a learning environment for the children.*” (emphasis added, p. 61) The failure to meet the standard outlined in the FDK plan of action impacts child wellbeing to the extent that even four-year-old children were able to independently identify some of the key problems with the school lunch environment.

Limitations

This is a qualitative study involving 21 child participants and their parents or caregivers as they transitioned from full day childcare to full day kindergarten. While data was contextualized with interviews with key actors, study findings may not be generalizable.

Conclusion

Over the course of this study the lunch environment in the childcare setting was observed to provide nutritious food (at all three sites), opportunities for adult modeling (at the Blueberry Childcare Centre) and positive peer pressure (to some extent at all sites, the most notably at the Blueberry and Raspberry Childcare Centres). By contrast, the lunch environment in the school setting was, by all accounts, understaffed, did not offer the young children the guidance and assistance they require, did not afford them sufficient time to eat and explicitly limited mealtime socialization. The children’s own self-reported wellbeing at lunch time in the childcare setting

was overwhelmingly positive¹¹³ whereas reports in the kindergarten setting were varied, with positive reports in reference to recess after lunch, nutrient-poor lunch treats, and the opportunity to be interviewed. Low consumption of nutritious foods throughout the kindergarten school day may be the result of the interplay between children not having enough time, insufficient staffing ratios for positive mealtime socialization, lack of a structure to offer modeling opportunities and resulting negative peer pressure. The findings from this study support the implementation of food-related regulations within the FDK program, comparable to those in the DNA and CCEYA.

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¹¹³ The only negative report was a child who was crying for their mother throughout the entire day that day.

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Well-being in the Kindergarten Eating Environment and the Role of Early Childhood Educators

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In Ontario, kindergarten children have recently begun to eat lunch at school with the implementation of the full-day kindergarten program. To date, there are no regulations to address the particular needs of young children in the school eating environment. Drawing on a year-long three-phase study that followed a cohort of 21 children as they transitioned from full-day childcare to full-day kindergarten, this study explores the impact of staff training and staff relationships on the well-being of kindergarten students. Findings suggest that the presence of an early childhood educator (ECE), a minimum staffing of two adults per room, and a collaborative approach between teacher and ECE have a positive impact on child well-being.

Key words: full-day kindergarten; early childhood education; well-being; eating environments

The full-day kindergarten (FDK) program in Ontario was implemented gradually over a five-year period beginning in the 2010–2011 school year and reaching completion the 2014–2015 school year. Prior to FDK implementation, 3- to 5-year-olds in full-day childcare in Ontario would have been covered under Ontario’s Day Nurseries Act (DNA). First implemented in 1948, Ontario’s DNA was Canada’s first provincial legislation specifically intended for child care. While the DNA was still in effect the year this study was completed, 2014–2015, it has since been replaced by the Child Care and Early Years Act (CCEYA), which has incorporated all previous nutrition-related policy and has added regulations to accommodate allergies, special dietary needs, and special feeding arrangements, along with “Eating Well with Canada’s Food Guide—First Nations, Inuit, and Métis” (Health Canada, 2010). The Act integrates an understanding of children’s developmental needs into the regulatory system, and has refined age-specific criteria in all relevant areas, including eating and nutrition. By contrast, there are no age-specific regulations whatsoever for food and nutrition in the Ministry of Education’s school food and beverage policy.

During the initial years of the FDK program, parents and teachers in the Toronto District School Board (TDSB) reported a number of distressing cases of inappropriately structured eating environments for very young children. In one of the motivating cases for this study, Red Mulberry School¹, which implemented FDK in year 3 of the rollout (2012–2013), had 100 to 120 junior and senior kindergarten students aged 3–5 years eat lunch in one room under the supervision of only five untrained adults. These children had 20 minutes to eat lunches, often in packaging that the youngest could not even open, in a very loud and chaotic room. Some children could cope, while others simply did not eat, hid under tables, “acted out,” or were sent to the office for, for example, hiding under the lunchroom tables (personal communication with JB², November 22, 2014; AS, December 1, 2014; MAB, April 13, 2015; CB, February 22, 2017). Teachers reported that many children were “difficult to handle” in the afternoon (MR, personal communication, April 24, 2015) and parents expressed concern for their children’s well-being during lunchtime (personal communication with DK, November 17, 2014; JB, November 22, 2014; AS, December 1, 2014; MAB April 13, 2015). It was this case, along with other similar accounts, that provided the initial stimulus for this study.

Method

This study is a qualitative research study using a mixed methods approach to assess the impact of kindergarten eating environments on children's well-being. Research directly with child participants was based on the mosaic approach (Clark & Moss, 2001) to facilitate a participatory process. Specifically, the participants introduced the researcher to their space and the people in the room, engaged in multiple loosely structured interviews, defined the meaning of the faces on the well-being chart³ used in the study, and drew pictures of their experiences of eating in the various study settings.⁴ These findings were triangulated with field notes detailing participants' activities, attentiveness, and apparent mood throughout the day, supported by commentary from the immediate staff describing, for example, whether the classroom dynamics on a given day were typical or atypical, and interviews with key informants.⁵

Conducted in the fifth year of the FDK rollout, 2014–2015, initial site selection was guided by a range of publicly available data in an effort to consider sites that were as structurally similar as possible. The criteria were as follows: the school was within a particular geographic area bounded by postal code, the school had to have a city-run childcare centre eligible for Toronto Children's Services subsidy, the quality ranking of the childcare centres' preschool rooms were all moderately high, the schools' Fraser Report rankings and learning opportunities index (LOI) were relatively similar, and average parental incomes at all schools in the first round of review were not more than \$5000 over the poverty line for a family of four. All 17 childcare–school pairings that met the first two criteria were considered. Within this set, four childcare–school pairings met all five criteria. Two of these four childcare centres agreed to participate. The director of the third childcare centre was enthusiastic, but their supervisor declined participation for reasons not made clear to the director. Both the director and supervisor of the fourth childcare centre were enthusiastic, but further investigation revealed a potential conflict of interest. At that time, the supervisor offered that another of the childcare centres they supervised would be able to participate. This centre met four of the five criteria, but exceeded the average parental income stipulated in during the first review. Nonetheless, this site was included to facilitate triangulation of results across the three sites (see Table 1).

Table 1: Site Criteria (2014 Data)

Site	“Preschool Room Daycare Quality Rating” (City of Toronto)	“School Ranking” (Fraser Institute)	“Learning Opportunities Index” (TDSB)	“Average parental income” at school (Fraser Institute)
Blueberry	3.51/5	7/10	224	\$41,000
Raspberry	3.78/5	7.2/10	324	\$53,400
Huckleberry	3.68/5	7.2/10	394	\$72,000

Within each site, only children attending the childcare centre on a full-time basis and intending to attend the FDK program at the same school were eligible to participate. Participation rates were 72.72%, 62.5%, and 100% of eligible children at the Blueberry, Raspberry, and Huckleberry sites respectively, for a total of 20 participants at the inception of the study. Over the course of the study, one child declined verbal assent, one child switched schools, one was not available for the third phase, and another, who intended to change schools but returned, contributed to participant interview data, such that ultimately there were a total of 21 participants—17 for the full course of the study and 4 who participated in one or two thirds of it.

The study was conducted in three phases. In Phase I, through the spring and summer of 2014, full-day observations

of each participant were taken in the childcare setting with detailed note taking for 5 of every 15 minutes. In addition, participants were asked to situate themselves on an age-appropriate well-being chart consisting of 5 faces once every 90 minutes (with the exclusion of during the scheduled afternoon nap), were invited to draw a picture relating to eating at child care and engaged in a short semistructured interview at the end of the day to discuss their experiences of eating in the childcare centre and at home, along with other areas of interest to the child. During Phase I, the parents of child participants were asked to complete a short survey including both demographic information mirroring that available in school board statistics about the school and questions regarding the child's eating habits. In Phase II, child participants were interviewed twice—once in September and once in October 2014—about their experience of transitioning to kindergarten and were asked to situate their eating experiences on the well-being chart used in Phase I. These interviews were conducted in the after-care setting which, for many participants, was also their daytime classroom. Phase III, much like Phase I, consisted of a full day of observations for each participant, this time in the classroom setting. Between January and June of 2015, child participants were observed for one day each and were interviewed as they situated themselves on the well-being chart once every 90 minutes on their observation day. Additionally, 18 key informant interviews (see Table 2) helped to provide further context and analysis.

Table 2: Key Informant Interviews

Name*	Role
Kerry McCuaig	Early childhood policy fellow at the Atkinson Centre for Child Development, OISE
Fidelia Torres	Instructor at the School of Early Childhood Education, George Brown College
Beverley Crossdale	Early childhood consultant with Community Living Toronto
R	In-house cook at Raspberry Childcare Centre
E	ECE at Raspberry Childcare Centre and before- and after-school program
CB	Lunchroom supervisor at Red Mulberry School
MS	OISE student teacher at Blueberry School and former ECE with kindergarten-aged children prior to FDK
EC	TDSB kindergarten teacher and former ECE
DK	TDSB kindergarten teacher and parent of child at Red Mulberry School
MR	TDSB kindergarten teacher at Red Mulberry School
IC	TDSB kindergarten teacher at Huckleberry School

MD	TDSB kindergarten teacher
MRB	TDSB kindergarten teacher at Raspberry School
GT	Health and physical education teacher at Raspberry School
JB	TDSB special needs teacher; parent of allergenic child at Red Mulberry School
AS	Parent of children at Red Mulberry School, moved to Raspberry School
MAB	Parent of children at Red Mulberry School
JJ	Special needs assistant at TDSB school in study area

**Note: Only the names of interviewees whose work is in the public domain are included. All other names have been altered to protect the anonymity of the children they work with.*

The study explores the impact of the lack of age-specific school food policy on the well-being of the participants. Well-being, here, is evaluated according to a model for well-being developed primarily based on Amartya Sen’s capabilities approach⁶ (1999), Diener and Seligman’s work on well-being⁷ (2004), and Martin Seligman’s work on flourishing⁸ (2011). My model for well-being offers three domains—material security, engagement, and relationship—with meaning at the core, underlying each domain (see Figure 1).⁹

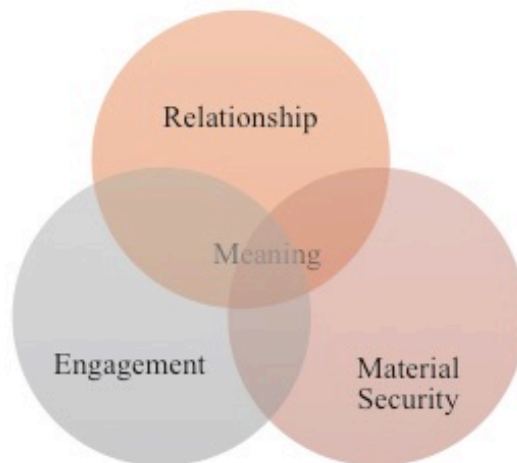


Figure 1: Well-being model.

These domains align easily with existing assessment categories for school food (Brown, Beardslee, & Prothrow-Stith, 2008), Konu and Rimpela's (2002) conceptual model for well-being in schools, and the Ontario Ministry of Education's (2011) student well-being research framework, rendering research findings readily available for both practical and academic applications (see Table 3).

Table 3: Well-being Model and Existing Assessment Categories for School Food

My model for well-being	Assessment categories for school food	Conceptual model for well-being in schools	Student well-being research framework
Material security	Health related benefits	School conditions & health	Physical
Engagement	Cognitive and educational benefits	Means for self-fulfillment	Cognitive
Relationship	Behaviour and psychosocial benefits	Social relationships	Psychosocial

This article focuses primarily on the relationship domain in Phase III, specifically exploring how staff training and staffing relationships in the school and school eating environment impact classroom dynamics and children's experiences of their eating environments.¹⁰

In the Classroom

As originally proposed in *Our Best Future* (Pascal, 2009) and elaborated in the *Early Years Study 3* (McCain, Mustard, & McCuaig, 2011) the full-day program would seamlessly integrate teachers and early childhood educators (ECEs) throughout a community hub where children would “spend their day in a consistent environment, with the same adults, all with the same expectations” (p. 10). In Ontario, the FDK program was deliberately structured with intended complementarity in the roles of the classroom teacher and ECE, wherein the former brings knowledge of elementary curriculum and the latter brings knowledge of early childhood development (Underwood et al., 2016). However, implementation has not lived up to this standard and, in the TDSB in particular, the structure of contracts and union relationships has, in many cases, relegated ECEs to a secondary status which, in turn, has excluded them from contributing to planning and class design (K. McCuaig, personal communication, May 6, 2015; Langford et al., 2016). At the same time, this study reveals that some individual school principals who have recognized the value of ECEs and their developmental education skills have managed to cultivate a collaborative atmosphere between classroom teachers and classroom ECEs. Regardless of class size or other factors, in this study, it was those classes in which the teacher and ECE work together to plan and structure both the day and the classroom that functioned the most smoothly, pointing to the central role of the ECE for the well-being of the children in this study.

The study involved childcare-centre-school pairings at Blueberry, Raspberry, and Huckleberry schools, with participants in two classrooms at Blueberry School, three classrooms at Raspberry school, and three classrooms at Huckleberry school (see Table 4).

Table 4: Participant Distribution in Kindergarten Classrooms

Site	Classroom	# of students	# of full-study participants	Lunchtime supervision
Blueberry	East	26	4	Untrained
Blueberry	West	24	3	Untrained
Raspberry	North-East	33	2	ECE
Raspberry	North-West	33	1	Untrained
Raspberry	South-West	32	1	Untrained
Huckleberry	North	28	1	ECE (B&A*) + classroom ECE and teacher
Huckleberry	East	28	1	ECE (B&A) + classroom ECE
Huckleberry	North-West	14	4	1 st *: ECE (practicum incomplete) 2 nd : classroom teacher 3 rd & 4 th : untrained

* B&A= staff in before- and after-school care program
 **1st= first observation day, 2nd= second observation day, etc.

At Raspberry School, the principal helped to foster a solid collaborative approach between the teachers and classroom ECEs and, despite having by far the largest classes in the study, these were the smoothest running classes in the study. Classroom ECEs were observed having opportunities to lead activities, classroom teachers were observed collaborating on in-the-moment decision making, teachers described how implementing ECE strategies at snack time, for example, had been effective, and both teachers and ECEs were observed working with the students in small groups.

In contrast, at Blueberry School, the ECEs functioned as teacher assistants. One of the two classes functioned fairly smoothly when the student teacher was present as a contributing member of the teaching team. This student teacher was a former ECE who had worked full-time with preschool- and kindergarten-aged children in a Toronto childcare centre. Unlike the classroom ECE, the student teacher was given opportunities to guide the classroom and, in fact, was observed to engage a participant who appeared disinterested in teacher-led activities. The student teacher attributed the ability to engage the children to previous ECE training (MS, personal communication, March 5, 2015).

In the other class at Blueberry School, the presence of a strong teacher was often insufficient to keep the class engaged, and during centre time many of the typically popular stations—like the water table, science centre, and crafts table—remained entirely vacant while the students’ attention was drawn to the Promethean board, an interactive white board which showed children’s music videos and cartoons. At one point the teacher had given a participant a “double time out” for reasons he could not recall. The participant described feeling “super sad.” In this class, too, the classroom ECE functioned as a teacher’s assistant, setting up materials but not contributing to decision making or meaningful opportunities to engage with the students as a group.

The importance of the ECE was, perhaps, never more evident than in the one classroom in the study with no ECE. At Huckleberry School, four participants were in a class with only 14 students, one teacher, and no ECE. This was the smallest classroom in the most affluent of the three schools, and it was also by far the most chaotic classroom in the study. On observation days, the three male participants in this classroom each initiated two to four violent interactions with their peers every hour and were described as “behavioural” by both the classroom teacher and other teachers, like the drama and library teachers. Because there was only one trained adult in this classroom, the teacher spent large portions of her time managing the particular needs of these students. Though she did employ a range of techniques in her attempts to engage the students, such as starting each day outdoors all year long, teaching lessons outdoors, offering leadership roles, incorporating games like Simon Says into routines, and using both breath work and visualization mindfulness practices, each of these children was sent to the office at least once during observation.

It is worth noting, however, that none of the three boys described as behavioural by the school staff had demonstrated a similar level of aggression in the childcare setting. During Phase I, one of the boys demonstrated deep sadness over separation from family members, sometimes crying throughout the day, consoled only by the close nurturing of one of the ECEs, and another cried easily and often throughout all phases of the study, showing a profound emotional concern for the natural world and animals. While both of these children were observed to be frequently physically violent and threatening to their peers in the school setting, neither one of these children had engaged in a single violent altercation during observation days in the childcare setting just a few months earlier. The third of these boys had demonstrated aggression in the childcare setting, but it was sufficiently infrequent that it did not receive special attention. The FDK program is meant to provide students with fluidity of care in an educational setting where the teacher offers curriculum and the ECE offers “age-appropriate program planning that promotes each child’s physical, cognitive, language, emotional, social and creative development and well-being” (Ontario Ministry of Education, 2010). The stark contrast in the “behaviours” of these three children suggests that the absence of an ECE to support emotional and social well-being may have a more significant impact on some children than on others.

The other two classrooms at Huckleberry School, each double the number of students (28 students), were staffed with both a teacher and an ECE. In the east classroom, the ECE was observed tending to a participant’s wound from a fall in the playground, spending well over 10 minutes with him to ensure that he felt better both physically and emotionally before he returned to play with his peers. This same ECE was later observed to advocate for children during gym class, engaging a male participant when he was reluctant to participate and advocating for other students when the physical education teacher denied them water and washroom breaks. In the north classroom, the ECE was observed helping the students and the supply teacher follow classroom routines on a day when the regular classroom teacher was involved in a training program. In fact, on multiple occasions, this ECE soothed distraught children and helped the supply teacher better understand the needs of the particular group of children in the class.

Full-day observations, included in the study to gain a better understanding of participants throughout the day when they were hungry, eating, sated, or otherwise, revealed the essential role of ECEs for child well-being in full-day care settings. In classrooms where the ECE played an active role in planning and structure at both Raspberry and Huckleberry Schools, children engaged in activities and were well supported when they could not. In the one classroom observed where the ECE was employed as a support staff, at Blueberry School, centre time appeared dominated by screen time rather than experiential learning, and a participant described receiving a punishment to which he could not ascribe meaning. Finally, in the one class with no ECE whatsoever, three of the four participants demonstrated ongoing signs of distress and exhibited a level of violence inconsistent with their behaviour in the

childcare setting. The full-day observations within the classroom setting revealed both the ECEs' unique ability to promote the children's overall well-being and the importance of having two trained adults who are familiar with the children present at all times.

The Lunch Hour

During the lunch hour at school, there are no minimum training requirements for staff. Key informants noted that because lunchtime is not instructional time, it was sometimes viewed as an "afterthought" because "it's only an hour" (personal communication, MD, October 29, 2015; AS, December 1, 2015; CB, February 22, 2017). Additionally, because it is "just an hour" in the middle of the day, the lunch hour can be very difficult to staff (MD, personal communication, October 29, 2015). This, however, is a significant departure from what was intended by the architects of FDK. Indeed, the policy recommendations for staffing clearly outline that "the schedules of the (two classroom) ECEs should overlap during the children's lunch period to allow for lunch breaks for the staff while maintaining a learning environment for the children" (Pascal, 2009, p. 61). Far from an afterthought not included in instructional time, lunchtime in the FDK program was meant to be supported entirely by trained staff to support the children's well-being and mealtime socialization.

In the childcare setting, current regulations require that staffing ratios are 1 staff member for every 8 children, with a maximum of 16 children per room in a preschool room (children ages 2.5 to 6 years) and 1 to 13 with a maximum of 26 children in a kindergarten room¹¹ (children ages 3.5 to 5.5 years). During Phase I, study participants were in preschool rooms at their respective childcare centres with a 1:8 staffing ratio and a maximum of 16 children. At Blueberry Childcare Centre, attending staff sat and ate with children at two U-shaped tables while other staff brought food into the room. While staff "sequenced" the food, serving a course of vegetables first, followed by a course that included starch, a protein, and finally fresh fruit at the end, children were offered choice, had the opportunity to serve themselves, and engaged in conversation with their peers. Staff offered guidance, such as reminders to ask to pass dishes rather than reach across the table. Child participants unanimously reported feeling "super-happy" during lunch, and parents reported that their children ate a wider variety of "healthy" foods than they did at home. Similarly, at Raspberry Childcare Centre, staff who were not the attending staff brought the food to the room while children sat at two rectangular tables, each with an attending staff member standing nearby, serving food, and reminding the children to eat. Child participants at this site reported feeling "in the middle," "happy," and "super happy" during lunch. At Huckleberry Childcare Centre, staff were responsible for final-stage food preparation and, as a result, primarily interacted with the children to serve food and to separate "disruptive" children when necessary. In this setting, child participants reported feeling "angry," "nothing," and "super happy" during lunch. Phase I findings suggest that, within the childcare setting, child participants most enjoyed the opportunity to share a meal with staff while being offered both choice and guidance, as was the case at Blueberry Childcare Centre.

In the school setting, in the absence of guiding policy, lunchrooms of up to 33 children were staffed by a single adult. In some cases, the lunch supervisor was an ECE and in others, lunch hour staff were untrained adults. During Phase III, the setting was so often a loud and chaotic one in which the children had difficulty eating and where disruptions and altercations sometimes became violent that the question of optimal eating environment, so present in Phase I, was superseded by the questions "Are the children able to eat?" and "Are the children safe?"

At Raspberry School, one of the lunchrooms was supervised by a trained ECE who was also a staff member in the before- and after-school care program provided by the childcare centre on site. Though this ECE described challenges due to being the only staff member and because the children only had about 20 minutes for the lunch

portion of the hour, the room she supervised was without incident on observation days. The ECE explained that there had been a steep learning curve in the fall for both herself and the students. However, as she got to know the children, she was able to implement her training to establishing seating arrangements which paired children who had an easy time with the routine with those who did not, focusing guidance on those children who had the most difficulty or were the most likely to disrupt their peers, structuring calm activities for those children who tended to eat very quickly (so that those who were still eating were not drawn to play in lieu of eating), arriving early to structure toileting time, and maintaining an even and instructive tone during emergent incidents. The child participants in this room reported feeling “in the middle” and “sad” during lunch, though within the context of other kindergarten lunchrooms observed, it is noteworthy that children were both safe and able to eat.

On the other hand, the other two classrooms were supervised at lunch by untrained adults. In one case, the lunch supervisor (LS) was the parent of a child at the school, and in the other case, the LS was the grandparent of a student at the school. The former LS explained that, feeling very overwhelmed at the start of the school year, she had independently undertaken to read as much as she could about child development of 3- to 5-year-olds and strategies for “managing” classroom dynamics. Of the lunchrooms supervised by untrained adults, this was the most effective insofar as while the room was messy and loud, the children were safe. That said, the LS was observed to manage the lunchroom in this way at the expense of assisting opening containers and offering children guidance—the room was not dangerous, but the children did receive the adult attention they required. The LS in the other room was both kind and hardworking, but during observation the lunchroom descended into chaos when one child had a toileting accident in the washroom requiring the full attention of the one staff present. Over a short period of time, mounting numbers of children became distressed at not being able to use the rest room. At the same time, two separate altercations among a total of five students distracted other students, most of whom were then unable to eat. The one participant in the room joined a group of her peers rearranging the furniture, dragging the children who were still eating around the room in their chairs. The participant in this room reported feeling “super happy” and appeared more energetic than she did at any other time that day, perhaps indicating a need for more unstructured play time. That said, she ate less than a quarter of her lunch. In fact, few children ate that day and, later, the classroom ECE noted that the children were “always more hungry for afternoon snack,” while, in classrooms where the lunchroom environment was conducive to the children eating lunch, few children participated in afternoon snack.

Neither of the two kindergarten classes at Blueberry School had trained staff supervising the lunch hour. In one class, the lunchroom was supervised by a parent of a child at the school, and the other class was supervised by someone who lived nearby. In addition, both rooms had students from older grades in the kindergarten lunchrooms who were meant to assist the younger children. In the east classroom, supervised by a parent, there were no significant safety issues, but the majority of the children were not able to eat even half of their lunch during the allotted time frame, and child participants reported negative feelings about this. In fact, while this was not among the most challenging lunchrooms in the study, the LS in this room engaged me in a lengthy conversation, eager to express concern over the functioning of the lunchroom, centered around the belief that “it is essential that there be better staff-to-student ratios during the lunch hour.” In this room, the older children sat together in a corner of the room and were of no assistance whatsoever. While there were no noteworthy safety concerns, students’ inability to eat enough food during the allotted time is problematic.

The LS in the other lunchroom was not able to effectively communicate with students because of limited English skills and instead spent the time in the lunchroom cleaning. Based on observations, it seems that the staff at the school was aware of this situation and made efforts to supplement the formal supervision, though there was no verbal confirmation of this. On observation days, both the classroom teacher and the classroom ECE were

observed giving up their own lunch break to assist in supervision. Another teacher from the school came to relieve the classroom teaching staff on two separate occasions. Additionally, the school principal spent part of the lunchtime with this classroom on each observation day. When asked, child participants reported that these adults were in the classroom at lunchtime “always,” “mostly always,” “most of the time,” and “it’s always like this.” The older students in this classroom actively engaged the kindergarten students, though this engagement seemed to increase in the presence of the principal and classroom teacher. All of this suggests that the school staff were working together to manage what appeared to be a suboptimal staffing arrangement. Unfortunately, even with this level of oversight, the classroom LS offered me chocolates with nuts on three separate occasions in a school with a kindergarten student having an anaphylactic nut allergy. The seriousness of this failing cannot be overstated, especially because it is part of the lunchroom supervisor’s job to ensure adherence to the TDSB’s “peanut-free zones” policy when there are children with severe allergies present.

At Huckleberry School, both of the classrooms with only one participant were supervised at lunch by an ECE, whereas the small class with four participants was supervised for the first six months by a supervisor who had completed the ECE program coursework but had not yet completed the practicum and for the last four months by an untrained adult. In the north classroom, both the classroom ECE and the classroom teacher joined the LS ECE to ensure that the students had a strong team and continuity during the lunch hour. This was by far the best-staffed room in the study, as the LS ECE was also a staff member in the before- and after-school care program run by the childcare centre in the building and the teacher was sufficiently dedicated to even donate her time on a day when she was engaged in training elsewhere in the building. The “seamless care” approach was seen in action here, and the lunch hour in this classroom was relaxed and comfortable, though this came at the expense of both members of the teaching team donating their lunch break to the students. The other kindergarten classroom which was also staffed with an ECE-trained lunchroom supervisor (who was also a staff member in the before and after school care program) and the donated time of the classroom ECE, was similarly calm and without incident, as compared to the lunchrooms with untrained staff.

Again, the one class of only 14 students offers an interesting case because it was the only lunchroom in which the same students were observed with both (partially) trained and untrained staff. There was one observation day in February, while the trained LS was still in place. On this day, while there were significant challenges during the regular class hours, the lunchtime ran smoothly. The LS explained that initially, “lunch was crazy. I can’t explain it, it was just crazy.” The LS went on, however, to explain that they had established a seating arrangement (with as few as two students to a table and none of the challenging students seated together) and a handwashing and washroom routine that staggered the children based on each child’s pacing, as observed. The LS described that “it took about a month and a half to get it sorted” (personal communication, February 11, 2015). On that observation day, there were no incidents during the lunch hour and, in fact, the lunchtime was calmer than it had been during instructional time and offered students a relaxed eating environment.

The observation days when the lunchroom was supervised by an untrained adult show a different picture. On one of the three other observation days, two of the challenging students were absent and the LS was late enough that lunch was almost entirely supervised by the classroom teacher. While this lunch hour was relatively smooth, the classroom teacher described that day as atypical, repeatedly telling me, “it’s so quiet today because two of the major players aren’t here. This never happens!” (personal communication, May 19, 2015). According to the classroom teacher, the relative calm could be attributed to the absence of two of the “disruptive” children, though lunch had also been quite calm in the presence of an ECE-trained lunch supervisor. The lunch hours on the other two observation days were described as typical for that room and were both consistent with the classroom challenges and with the other lunchrooms supervised by untrained adults. In other words, there was an escalation

of disruptive and dangerous behaviour during the lunch hour. For example, on one day a male participant aggressively chased a female student around the room, and when he caught her, he pulled her to the ground by the back of the neck, mounted her, and searched her pockets. He explained later that he believed she had stolen candy from his backpack. This was not the only violent altercation this student initiated during the 20-minute lunchtime supervised by an untrained adult, but it was the only one the lone staff member observed. On the other observation day, the participant being observed had a very difficult time coping in the absence of a familiar adult. Though he was slightly less aggressive with his peers than he had been during instructional time, he did not eat anything at all, he knocked other children's food to the ground, he knocked down the building structure a peer had left to work on after lunch, and he cried deeply and could not be consoled by the lunch supervisor. It was clearly an extremely difficult 20 minutes for this child. The lunch hour findings from a typical day in this atypical classroom support the findings from the other lunchrooms in the study: that kindergarten children require support from familiar trained staff during the lunch hour.

Overall, regardless of class size or the typical functioning of the students in the classroom, those lunchrooms supervised by a trained ECE functioned much better than those supervised by an untrained adult. That said, it is imperative to note that every ECE-trained lunchroom supervisor underscored that the lunchrooms are severely understaffed, based on the needs of children aged 3 to 5 years old. The lunchroom ECE at Raspberry School elaborated that they were unable to properly implement their training due to excessive numbers of children in a small space, inadequate staff-to-student ratios, and insufficient time for children to eat (personal communication, January 29, 2015). Nonetheless, when compared to lunchrooms supervised by entirely untrained staff, ECEs were at least able to create a safe environment in which the children could at least eat. There is a structural suboptimality to lunchtime, which the ECEs are able to partially mitigate, but this by no means represents a best practice.

Child participants, at the age of 3 or 4, were understandably unaware of the staff's level of training and, additionally, had no basis for comparison. With respect to the kindergarten eating environment, the children did, however, independently¹², repeatedly, and consistently note that (1) there was not enough time to eat, (2) they were reprimanded for talking, and (3) it was often too noisy to eat. Nonetheless, most participants still felt positively about lunch because (1) they liked to eat, and (2) they liked being able to talk to their friends. The fact that the children both complained about being reprimanded for talking with their peers and pointed to talking with peers as one of the reasons they like lunchtime indicates that offering a lunch setting where they have the time to eat and socialize would be appreciated by children of this age. Indeed, it is noteworthy that children independently identified the lost opportunity for socializing as a concern and the possibility for socializing as an asset, because key informant interviews also identified the lost opportunity for mealtime socialization as one of the problems with the school eating environment.

Setting the Tone

Both the nature of the relationship between the teacher and the ECE in the classroom and the structure of the lunchroom setting are significantly impacted by the direction set by the principal. According to the literature, the principal is the single most important factor in school effectiveness (Bartoletti & Connelly, 2013; Smith, 2016). Additionally, key informant interviewees underscored the central role of the principal (personal communication, MRB, June 25, 2015; GT, June 25, 2015; E, June 23, 2015) and suggested that principals have considerable leeway in structuring both the budget and the timetable for staff, with considerable direct impact on the classroom environment (personal communication, LB, April 27, 2015; MD, October 2015; JB, November 22, 2015), thereby establishing the parameters of staffing and staff-to-student relationships (personal communication, LB, April 27, 2015; MD, October 2015; AS, December 1, 2015). As the librarian at Blueberry School noted, "the whole

school culture reflects the principal's leadership" (personal communication, April 27, 2015). This is consistent with observations throughout the study. While this is a qualitative study with a small sample size, because there were participants in multiple classrooms at each school it was possible to gain a sense of what kind of teacher–ECE relationship each of the three principals fostered. Children benefitted from the input of the classroom ECE in those settings where a balanced teacher–ECE relationship was fostered. This finding is consistent with the literature (Corter et.al. 2007; Gibson & Pelletier, 2010; McGinty, Justice, & Rimm-Kaufman, 2008).

Throughout the course of the study, key informants described the benefits of the fluid care model, and one key actor described how this model was implemented during the lunch hour at their school. Kerry McCuaig, Fidelia Torres, and the student teacher and former kindergarten-age ECE all echoed the importance of seamless transitions and fluid care that were outlined in Pascal's (2009) *With Our Best Future in Mind* (personal communication, K. McCuaig, May 6, 2015; F. Torres, June 18, 2015; MS, March 5, 2015). The student teacher explained that during their years as an ECE, the staff closely monitored what children ate (as is required by regulation) and would gain a sense of "how they [the children] would be able to manage in the afternoon" (personal communication, MS, March 5, 2015). Through developing close relationships with the children and always having a trained staff person well known to each child in the room, the staff in the childcare centres could better anticipate and respond to the children's needs. Another key informant, a kindergarten teacher whose assignment was to be the relief staff for all five kindergarten teachers at their school, described a solution to the lunchroom staffing challenge employed at their school. Based on concerns about the safety of the children during the lunch hour, the kindergarten teachers at their informal weekly lunch hour meetings came up with a proposal that classroom teacher and ECE lunch breaks be staggered so that every day, every kindergarten lunchroom would be staffed by both a lunch supervisor and one member of the regular classroom teaching team. The principal agreed, and the teaching staff reported that the situation had "improved" (MD, personal communication, October 29, 2015). This third-party report suggests that kindergarten students at this school benefitted from the principal's willingness to implement this teacher-driven strategy.

That said, this is but a single case within a much larger system. Additionally, whether assessing the impact of principals, teachers, ECEs, or lunchroom supervisors, it is important to bear in mind that great people can sometimes transcend structural weaknesses. Consequently, it is important not to conflate the efficacy of an extraordinary individual working in a poorly designed system with programmatic success. Indeed, the goal here is to identify the problem areas and best practices in order to benefit all students. One challenge, as both the teacher from the small classroom at Huckleberry School and the teacher from the aforementioned example have noted, is that parents remain unaware of what the problem areas are, and consequently cannot contribute to dialogue advocating for programmatic change. Indeed, one parent of a child participant described enquiring about the lunch hour, finding staff responses evasive, and feeling that "the whole thing is shrouded in mystery" (personal communication, BMP, October 2014). What is frightening, is that this secrecy may be intentional. One interviewee, a kindergarten teacher in the TDSB, described someone from the Ontario Ministry of Education Early Years Branch specifically instructing the kindergarten teaching staff at their school to "not be too specific" in response to parent concerns about the lunch hour, explaining that "we want this to sound good." The interviewee went on to say "Why don't the parents know? Because the school knows it's bad.... I don't think it's okay. I want parents to understand that it is hard to keep them [the children] safe with these parameters" (MD, personal communication, October 29, 2015). These sentiments—that it is up to the parents to lobby for change, on the one hand, and that parents are kept, or are intentionally kept, in the dark, on the other—echo throughout the key informant interviews. It is clear that there is a need for both further research and greater transparency in order to have a meaningful dialogue and establish best practices for the kindergarten eating environment.

Conclusion

The study was initially designed to examine the well-being impacts of the kindergarten school eating environment and to identify best practices for age-specific regulation in this area. The childcare setting offers a useful basis for comparison, because children of this age have been in full-day care in childcare centres for decades, often in school buildings, and the regulation of this care is mandated through the Ministry of Education. Among the three sites, Blueberry Childcare Centre offered the eating environment with the highest approval rating among child participants and the most positive impact on both mealtime socialization and food choices, based on study observations and parent reports. The structure of the school lunch hour, with expectations that children will eat and play outdoors in one hour under the supervision of single, often untrained, adult, raised questions of basic safety and whether or not the children were able to eat. Excluding rooms where staff donated their time out of concern for the children, the best kindergarten lunchroom in the study was the one at Raspberry School staffed by a single ECE. This room, however, can be described as effective but not optimal, because while the children were safe and could eat, the lunchroom operated with an institutional efficiency and child participants expressed negative feelings about this.

Throughout the first and third phases of the study, participants were observed for a full day. Classroom observations demonstrated that the most effective classrooms were those staffed by two adults, a teacher and an ECE, who had the opportunity to cultivate a collaborative approach to running the classroom. While in these cases the collaborative approach was supported by a strong principal, this needs to be supported through policy, as was intended by the architects of FDK (Pascal, 2009). Both key informants and the literature suggest that structuring planning time for both members of the teaching team promotes co-teaching (K. McCuaig, personal communication, May 6, 2015; Underwood et. al., 2016).

Furthermore, study findings suggest that best practices in eating environments were only found in the childcare setting, that the safest school lunchrooms are staffed by trained ECEs, and that some lunchrooms staffed by untrained adults can only be described as dangerous. In fact, teaching staff, ECEs, and untrained lunchroom staff all expressed concern for the welfare and well-being of children during the lunch hour under the current conditions. Observations show that many staff members are sufficiently concerned about lunchroom staffing that they volunteer their time to support their students during that time, in some cases even in the presence of an ECE-trained lunchroom supervisor. The rooms in which ECE lunchtime supervision is supplemented with classroom ECE and/or teacher supervision represent the closest example of a best practice in the school setting and most closely align with the original design for FDK. While it is clear that the students in these classes benefit from this volunteer work, the risks evident in some of the classrooms demonstrate that a policy response is necessary to ensure better supervision and care during the lunch hour for all students.

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(Endnotes)

- 1 Site names have been changed to protect the anonymity of the children.
- 2 With the exception of three professionals in the field of early childhood whose views are in the public domain, anonymity was offered to all key informants to protect the privacy of the children they work with.
- 3 The well-being chart used in this study included 5 faces including super happy/WB5, happy/WB4, neutral/WB3, sad/WB2 and super sad/WB1. The neutral face was referred to as “kind of in the middle” and some participants referred to it as “bored”. Additionally, some participants identified WB1 as “angry”.

4 The initial study design included children taking photographs, as in the original mosaic study, but the ethics research review committee at the school board declined the use of photography.

5 Staff commentary during observation days was documented in field notes, whereas key informant interviews were recorded and were not conducted on site.

6 In *Development as Freedom* (1999), Nobel laureate Amartya Sen builds on Aristotle's understanding of human flourishing, arguing that "development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy" (p. 14). Sen outlines that an emphasis on human capability, rather than human capital, leads to "the expansion of human freedom to live the kind of lives that people have reason to value" (p. 295). Ultimately Sen posits that a person's ability to lead a good life is based on valued beings and doings, such as being healthy and having loving relationships, and this capabilities approach contributes to a new set of social indicators, including the United Nations Human Development Index which embodies this approach to well-being.

7 Similarly, in "Beyond Money: Toward an Economy of Well-Being" (2004), Diener and Seligman argue that "well-being should become a primary focus of policy makers" because, once basic needs are met, social relationships and work satisfaction emerge as key indicators for well-being, which, in turn, produces positive outcomes like improved work performance and good health.

8 More recently, in *Flourish: A Visionary New Understanding of Happiness and Well-Being* (2011), Seligman outlines five elements of well-being—positive emotion, engagement, relationship, meaning, and accomplishment (pp. 13-29).

9 Because my model is eudaimonic (focusing on meaning and self-realization to evaluate functioning), not hedonic (focusing on feeling pleasure), positive emotion, or affect, is not among the domains.

10 The comparison of children's eating experiences in the childcare setting and the kindergarten setting is addressed in an article in review for *Social Indicators Research* and overall policy recommendations are detailed in an article in review for *Canadian Association of Food Studies*.

11 Preschool room regulations under the Child Care and Early Years Act remain the same as they were under the Day Nurseries Act (in its final year at the time of the study), though kindergarten room regulations have gone from a ratio of 1:10 with a maximum of 20 children to 1:13 with a maximum of 26 children.

12 In response to general questions, such as “How do you feel about lunch at school?” children identified these areas of concern without prompting or suggestion in conversation with the reviewer.

Appendix F: Self-Reported Wellbeing Tables

Participants' self-reported wellbeing tables are organized by phase and by site. During P1 and P3 observation notes were taken at 15-minute intervals, for five of every 15 minutes. The timescale in the wellbeing tables details group activity in 15-minute increments for context. The P2 interviews were all conducted in the after-school care setting and, thus, there is a single entry for each date.

Phase 1

Blueberry Childcare Centre.

Table 15: Phase 1 full day self-reported wellbeing, Blueberry Childcare Centre.

		MB	LB	LiB	EB	BB	OB	JB	RB	DB
9:00-9:15	transition									
9:15-9:30	outdoor gross motor (OGD)	4	3	5	5	4	1	5	NA	5
9:30-9:45	OGD									
9:45-10:00	OGD									
10:00-10:15	OGD									
10:15-10:30	OGD									
10:30-10:45	OGD									
10:45-11:00	OGD									
11:00-11:15	OGD	5								
11:15-11:30	transition		3	5						
11:30-11:45	lunch				5	5	5	5	NA	5
11:45-12:00	lunch									
12:00-12:15	nap time									
12:15-12:30	nap time									
12:30-12:45	nap time									
12:45-1:00	nap time									
1:00-1:15	nap time									
1:15-1:30	nap time									
1:30-1:45	nap time									
1:45-2:00	nap time									
2:00-2:15	transition									
2:15-2:30	free time									
2:30-2:45	free time	4	4	5	5	5	5	5	NA	5
2:45-3:00	free time									
3:00-3:15	free time									
3:15-3:30	snack									
3:30-3:45	snack									
3:34-4:00	free time	3	NA	5	5	5	5	5	NA	4

Raspberry Childcare Centre.

Table 16: Phase 1 full day self-reported wellbeing, Raspberry Childcare Centre.

		AR	LR	ZR	KR	SR
9:00-9:15	free play					
9:15-9:30	transition					
9:30-9:45	OGD	5	5			
9:45-10:00	OGD			2		
10:00-10:15	OGD				4	4
10:15-10:30	OGD					
10:30-10:45	transition					
10:45-11:00	free play		5			
11:00-11:15	carpet time			4	4	
11:15-11:30	carpet time					
11:30-11:45	lunch	5				4
11:45-12:00	lunch					
12:00-12:15	free play	4	3.5	5	4	5
12:15-12:30	carpet time					
12:30-12:45	nap time					
12:45-1:00	nap time					
1:00-1:15	nap time					
1:15-1:30	nap time					
1:30-1:45	nap time					
1:45-2:00	nap time					
2:00-2:15	nap time					
2:15-2:30	transition					
2:30-2:45	free play	5	5	NA	5	4
2:45-3:00	snack					
3:00-3:15	free play		5	5		
3:15-3:30	free play	5			2	NA
3:30-3:45	free play					
3:45-4:00	free play					

Huckleberry Childcare Centre.

Table 17: Phase 1 full day self-reported wellbeing, Huckleberry Childcare Centre.

		JaH	AH	MH	JoH	GH	NH
9:00-9:15	free play	1	4	NA			
9:15-9:30	carpet time				5		3
9:30-9:45	carpet time						
9:45-10:00	OGM						
10:00-10:15	OGM					4	
10:15-10:30	OGM						
10:30-10:45	OGM						
10:45-11:00	OGM						
11:00-11:15	OGM						
11:15-11:30	OGM						
11:30-11:45	transition	5	5	NA	4	5	5
11:45-12:00	lunch						
12:00-12:15	lunch						
12:15-12:30	lunch	5	5	NA	5	3	3
12:30-12:45	nap time						
12:45-1:00	nap time						
1:00-1:15	nap time						
1:15-1:30	nap time						
1:30-1:45	nap time						
1:45-2:00	nap time						
2:00-2:15	nap time						
2:15-2:30	nap time						
2:30-2:45	transition	5	4	NA	5	1	1
2:45-3:00	snack time						
3:00-3:15	music lady						
3:15-3:30	music lady						
3:30-3:45	music lady						
3:34-4:00	music lady						
4:00-4:15	transition	5	NA	NA	5	4	5
4:15-4:30	OGM						

Phase 2

Blueberry After-School Care.

Table 18: Phase 2 self-reported wellbeing, Blueberry After-School Care.

	LiB	EB	JB	RB	LB	OB
Sept 17 2014	1	4	5	4	4	4
Oct 15 2014	3	5	4	4	NA	NA

Raspberry After-School Care.

Table 19: Phase 2 self-reported wellbeing, Raspberry After-School Care.

	ZR	KR	LR	AR
Sept 18 2014	3	4, 2	4	NA
Oct 19 2014	5	2	2	3, 5

Huckleberry After-School Care.

Table 20: Phase 2 self-reported wellbeing, Huckleberry After-School Care.

	GH	MH	AH	NH	JaH	JoH
Sept 19 2014	3	NA	5	3	3	5
Oct 17 2014	NA	grumbly	5	2	3	NA

Phase 3

Blueberry School, participants RB & BB.

Table 21: Phase 3 full day self-reported wellbeing, RB & BB.

	Mar 5 2015	RB	Mar 13 2015	BB
9:00-9:15	outdoor play	Rowley	outdoor play	Brooklyn
9:15-9:30	outdoor play & transition		outdoor play	
9:30-9:45	transition & carpet time		outdoor play & transition	
9:45-10:00	transition & library		write name, carpet time	
10:00-10:15	library		centre time	
10:15-10:30	library & transition		centre time	5
10:30-10:45	snack time	5, 4, 3	snack time	
10:45-11:00	centre time		transition, music	
11:00-11:15	centre time		music	
11:15-11:30	centre time		transition, assembly	
11:30-11:45	centre time		assembly	5
11:45-12:00	tidy, video workout, story		assembly	
12:00-12:15	lunch	2	transition & lunch	4
12:15-12:30	transition		lunch & transition	
12:30-12:45	outdoor play		outdoor play	
12:45-1:00	outdoor play		outdoor play	
1:00-1:15	outdoor play & transition		gym	
1:15-1:30	gym		gym	
1:30-1:45	gym		tidy, transition, carpet time	
1:45-2:00	transition & carpet time	5	carpet time (story)	
2:00-2:15	carpet time		carpet time (story)	
2:15-2:30	carpet time & centre time		carpet time (promethean weather) centre time	5
2:30-2:45	centre time (snack is a centre)	5	centre time, 2:25 looks tired and retreats to reading corner	
2:45-3:00	centre time		centre time, sets up pillows and lies down	3
3:00-3:15	transition		centre time, still resting with eyes closed	
3:15-3:30			tidy, carpet time	

Blueberry School, Participants OB & JB.

Table 22: Phase 3 full day self-reported wellbeing, OB & JB.

	Mar 25 2015	O	Apr 16 2015	J
9:00-9:15	outdoor play		outdoor play, transition	
9:15-9:30	outdoor play & transition		transition, write name, carpet time (with a book)	5
9:30-9:45	transition		carpet time (teacher directed)	
9:45-10:00	carpet time (sit with book)		hand washing & snack	
10:00-10:15	carpet time: student-teacher leads morning song, prometean board weather		snack, prometean video, transition	
10:15-10:30	snack		gym	
10:30-10:45	transition, music		gym	
10:45-11:00	music	4	transition, music class	
11:00-11:15	transition, centre time		music class	
11:15-11:30	centre time, TVO kids on prometean	5	music class & transition	
11:30-11:45	centre time & transition with music videos on the prometean		lunch	5
11:45-12:00	tidy with music videos, lunch	5	lunch, carpet time	
12:00-12:15	lunch		carpet time, transition, outdoor play	
12:15-12:30	indoor recess: magic school bus on prometean		outdoor play	
12:30-12:45	indoor recess: magic school bus on prometean		outdoor play & attendance in line	
12:45-1:00	indoor recess: student-teacher does cool science video with students		outdoor play	
1:00-1:15	centre time		outdoor play & tidy outdoor toys	
1:15-1:30	centre time	1,5	slow transition, teacher scolded students	
1:30-1:45	centre time, tidy, exercise video, reading buddies		carpet time	
1:45-2:00	reading buddies	5	centre time (promethean board for YouTube then iPad)	5
2:00-2:15	reading buddies, carpet for exercise then dance		centre time (on iPad and gazing off at YouTube)	
2:15-2:30	story time		library for 13/26 kids, including J	
2:30-2:45	cupcakes (on the floor) then centre time		library	
2:45-3:00	centre time		tidy time (back in class to tidy centres)	
3:00-3:15	tidy time			
3:15-3:30				

Blueberry School, Participants EB & MB.

Table 23: Phase 3 full day self-reported wellbeing, EB & MB.

	Apr 24 2015	EB	Apr 27 2015	MB
9:00-9:15	outdoor play & attendance		outdoor play & attendance	
9:15-9:30	outdoor play & transition		outdoor play	
9:30-9:45	write name, carpet time		transition, write name	
9:45-10:00	carpet time		reading', carpet time	
10:00-10:15	carpet time		carpet time	
10:15-10:30	snack	4	carpet time	
10:30-10:45	transition, gym		carpet time, centre time	2
10:45-11:00	gym		centre time	
11:00-11:15	transition, music		centre time	
11:15-11:30	music class		centre time	
11:30-11:45	music class & transition		tidy & lunch	4, 2
11:45-12:00	wash hands & pizza lunch	5	lunch	
12:00-12:15	pizza lunch chaos		transition	
12:15-12:30	transition, carpet, transition		outdoor play	
12:30-12:45	outdoor play (other LM offers chocolate w nuts)		outdoor play	
12:45-1:00	outdoor play, transition		transition	2
1:00-1:15	roof garden with parent volunteers		reading buddy at library	
1:15-1:30	roof garden with parent volunteers		reading buddy at library	
1:30-1:45	transition, carpet time	4	carpet time: promethean breathing exercise & outer space video	
1:45-2:00	carpet time, centre time		carpet time, centre time (1:56)	
2:00-2:15	centre time, time out for E	3	group work	5
2:15-2:30	centre time, time out for E		group work	
2:30-2:45	centre time		centre time (computer)	
2:45-3:00	centre time		centre time (computer)	
3:00-3:15	centre time, tidy time		tidy time	
3:15-3:30				

Blueberry School, Participant LB.

Table 24: Phase 3 full day self-reported wellbeing, LB.

	May 14 2015	LB
9:00-9:15	outdoor play & attendance	
9:15-9:30	outdoor play and transition	
9:30-9:45	writes name, carpet time	
9:45-10:00	carpet time (9:52 rhyme guest arrives late)	
10:00-10:15	carpet time (rhyme lady)	
10:15-10:30	carpet time, transition, snack	3
10:30-10:45	transition, gym	
10:45-11:00	gym	
11:00-11:15	gym, transition, music	3
11:15-11:30	music	
11:30-11:45	music	
11:45-12:00	transition, lunch	
12:00-12:15	lunch	
12:15-12:30	transition, outdoor play	
12:30-12:45	outdoor play	5
12:45-1:00	outdoor play, attendance, outdoor play	
1:00-1:15	transition, carpet time	
1:15-1:30	carpet time, sesame street on the promethean	
1:30-1:45	carpet time (sesame street on the promethean), centre time	
1:45-2:00	centre time	
2:00-2:15	centre time	
2:15-2:30	centre time	4
2:30-2:45	library	
2:45-3:00	library	
3:00-3:15	transition & tidy	
3:15-3:30		

Raspberry School, Participants AR & ZR.

Table 25: Phase 3 full day self-reported wellbeing, AR & ZR.

	Jan 7 2015	AR	Jan 8 2015	ZR
9:00-9:15	carpet time		carpet time	1
9:15-9:30	carpet time		transition	
9:30-9:45	centre time		music (& movement in basement)	
9:45-10:00	transition		music & transition	5
10:00-10:15	music & movement (in basement)		snack	2
10:15-10:30	music & movement (in basement)		snack, trans, carpet	5
10:30-10:45	transition		centre	
10:45-11:00	snack	5	centre	
11:00-11:15	carpet time		center	
11:15-11:30	centre time		centre & carpet	
11:30-11:45	transition	3	carpet time w/ video	
11:45-12:00	lunch	4	lunch	
12:00-12:15	carpet time	5	lunch	
12:15-12:30	carpet time		lunch	5
12:30-12:45	indoor gross motor		wild play, too cold for outdoors	
12:45-1:00	lying down	3	carpet time	
1:00-1:15	carpet time		indoor gross motor	
1:15-1:30	centre time	3, 5	indoor gross motor	2
1:30-1:45	centre time		centre time	5
1:45-2:00	centre time		centre time	
2:00-2:15	centre time	3	centre time	
2:15-2:30	transition	4	centre & snack	
2:30-2:45	snack table	5	snack	5
2:45-3:00	carpet time		carpet time w/ video	
3:00-3:15	transition		transition	2

Raspberry Site, Participants KR & LR.

Table 26: Phase 3 full day self-reported wellbeing, KR & LR.

	Jan 28 2015	KR	Jan 29 2015	LR
9:00-9:15	transition & carpet	2	carpet time	
9:15-9:30	carpet		concert practice (in class)	
9:30-9:45	centre time (snack is a station)		carpet time (very fidgety) & centre time	
9:45-10:00	centre time	5	centre time & transition	5
10:00-10:15	centre time (plus lice checks)		music class (2nd floor)	
10:15-10:30	centre time		music class (2nd floor, music theory)	
10:30-10:45	transition		music class...movie	
10:45-11:00	concert practice (in gym)		music class, transitions & concert practice (in gym)	1
11:00-11:15	centre time (laying down)	2	snack (in class)	
11:15-11:30	centre time		centre time	5
11:30-11:45	centre time & transition		centre time & transition	
11:45-12:00	lunch		lunch	
12:00-12:15	lunch	4, 3	lunch	
12:15-12:30	lunch		lunch	1
12:30-12:45	transition		carpet time	
12:45-1:00	outdoor play		carpet time & transition	4
1:00-1:15	outdoor play		outdoor play	
1:15-1:30	outdoor play		outdoor play	
1:30-1:45	outdoor play		outdoor play, transition & carpet time (with health teacher)	
1:45-2:00	outdoor play & transition		transition & snack	
2:00-2:15	transition		snack & centre time (room becomes chaotic)	
2:15-2:30	carpet time	2	centre time	
2:30-2:45	center time (snack suggested)	4	centre time (chaos continues)	
2:45-3:00	concert practice (in gym)		tidy & carpet time (lies down)	5
3:00-3:15	transition		carpet time & concert practice	4
			transition	

Huckleberry Site, Participants NH & AH.

Table 27: Phase 3 full day self-reported wellbeing, NH & AH.

	Feb 11 2015	NH	May 19 2015	AH
9:00-9:15	transition & outdoor play		outdoor play	
9:15-9:30	transition & drama and dance		outdoor play	4
9:30-9:45	drama and dance		transition & music class	
9:45-10:00	drama and dance		music class	
10:00-10:15	centre time (snack is a centre)		music class & transition	
10:15-10:30	centre time	3	snack time (only together on 'day 2')	
10:30-10:45	centre time		reading buddies w grade 3	
10:45-11:00	centre time & transition		outdoor play w reading buddies	
11:00-11:15	carpet time		outdoor play & transition	
11:15-11:30	carpet time & transition	1	carpet time & transition to lunch	
11:30-11:45	lunch		lunch	
11:45-12:00	carpet time	5	lunch	4
12:00-12:15	transition & outdoor play		transition & outdoor play	
12:15-12:30	outdoor play		Outdoor play & transition	
12:30-12:45	outdoor play & transition		transition & gym	
12:45-1:00	carpet time		gym in the playground	
1:00-1:15	carpet time		gym in the playground	
1:15-1:30	centre time		transition & carpet time	
1:30-1:45	centre time	3	carpet time	
1:45-2:00	centre time		centre time	
2:00-2:15	centre time & transition		centre time	
2:15-2:30	carpet time		centre time	
2:30-2:45	transition & outdoor play	5	centre time & transition	4
2:45-3:00	outdoor play		carpet time (sharing circle)	
3:00-3:15	outdoor play		carpet time (no outdoor play b/c it's day 2)	

Huckleberry Site, Participants MH & JoH.

Table 28: Phase 3 full day self-reported wellbeing, MH & JoH.

	May 22 2015	MH	May 24 2015	JoH
9:00-9:15	carpet time (supply teacher today)		transition & outdoor play	
9:15-9:30	carpet time		outdoor play & transition to snack	
9:30-9:45	Ojibway class	4	snack (outdoors, self-regulated)	
9:45-10:00	Ojibway class		snack (self-regulated) & centre time (outdoors)	4
10:00-10:15	Ojibway class & transition		centre time (outdoors)	
10:15-10:30	snack time, supply reads story during snack time		centre time (outdoors)	
10:30-10:45	carpet time		transition & carpet time	
10:45-11:00	carpet time		carpet time	
11:00-11:15	math sheets		centre time	
11:15-11:30	math sheets, 11: 25 lunch	1, 5	centre time	1
11:30-11:45	lunch		lunch	
11:45-12:00	lunch		lunch & transition	
12:00-12:15	play, carpet & transition to outdoor play		outdoor play, light rain, return to class	
12:15-12:30	outdoor play		indoor play (due to rain)	
12:30-12:45	transition indoors to gym (3 classes in gym)		indoor play (due to rain)	
12:45-1:00	gym		carpet time	
1:00-1:15	gym		outdoor play	
1:15-1:30	gym & transition		transition to library	1
1:30-1:45	carpet time (ECE teaches b/c supply isn't back from lunch)	4	library	
1:45-2:00	centre time		carpet time	
2:00-2:15	centre time		snack (self-regulated)	
2:15-2:30	centre time & math		snack (self-regulated)	
2:30-2:45	snack	4	snack (self-regulated)	4
2:45-3:00	centre time		carpet time (sharing circle)	
3:00-3:15	centre time & transition		carpet time (sharing circle)	

Huckleberry Site, Participants JaH & GH.

Table 29: Phase 3 full day self-reported wellbeing, JaH & GH.

	May 29 2015	JaH	June 4 2015	GH
9:00-9:15	transition & outdoor play		announcements & transition to outdoor play	
9:15-9:30	outdoor play & transition		outdoor play	
9:30-9:45	drama & movement		outdoor play (inside cleaning wound)	2
9:45-10:00	drama & movement		transition & carpet time	
10:00-10:15	drama & movement, transition		carpet time	
10:15-10:30	carpet time, centre time, snack as a station	5	centre time	
10:30-10:45	centre time, still snacking		centre time	
10:45-11:00	centre time		centre time (snack is a station)	
11:00-11:15	centre time		centre time (snack is a station)	
11:15-11:30	centre time, carpet time, lunch		centre time & transition to lunch	
11:30-11:45	lunch & story or play time	5	lunch & carpet time (self-selected)	3
11:45-12:00	play time		carpet	
12:00-12:15	tidy, transition, outdoor play		carpet	
12:15-12:30	outdoor play		outdoor play	
12:30-12:45	outdoor play & transition inside		transition & carpet time, NFB short film	
12:45-1:00	transition		carpet time with 3 min of gross motor being animals	
1:00-1:15	story, centre time		carpet time	
1:15-1:30	centre time (teacher has to leave b/c her child is ill)		carpet time, transition, gym	G wants interview later
1:30-1:45	centre time		gym	
1:45-2:00	centre time		gym	
2:00-2:15	centre time		transition & centre time	
2:15-2:30	centre time & carpet time (sharing circle)		centre time	3
2:30-2:45	outdoor play	chart	centre time	
2:45-3:00	outdoor play & transition inside		carpet time	
3:00-3:15	carpet time (story)		carpet time (show & share)	

Appendix G: Participant Notes

Blueberry site participant notes

MB at the Blueberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons: none

How the child eats at home:

Is very selective about what they eat.

Eats quickly.

Sometimes refuses to eat.

Child's favourite foods: jerk chicken, sushi, hotdog, fries, chocolate, tofu, salmon, cheese

How often the child eats these foods: weekly

Child's least preferred foods: broccoli

Does the child eat these foods:

How often the child eats these foods:

Is convinced to try once a month or so

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Probably about the same. I understand there are days he doesn't eat at all, then he says he ate salad!

Concerns about the child's eating habits at home:

Yes. He doesn't try vegetables anymore. He did as a toddler but doesn't now. I don't want to have to hide them.

Concerns about the child's eating habits at daycare:

No. I trust that he's eating healthy food when he does eat. Plus it's only one meal a day. I feel it's up to me to provide what he needs.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

I'm very nervous about packing a lunch that is healthy that he'll actually eat. I worry that without the "peer" pressure of all eating the same thing, he'll get even pickier than he is.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

I really don't know. I just hope that there will be supervision and that he'll eat.

Child participant interviews.

Phase 1 observation date: June 3, 2014

Age on date of observation: 3 years, 5.5 months

Awareness (where are we, who are the staff, what has transpired that day): is aware of where we are, who the core staff members are and his own preferred activities—playing, building lego and making space ships

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): likes crackers and strawberries at daycare, does not like broccoli, only eats it at home

Child introduced topics: does not want to draw a picture, enjoyed talking into the microphone

June 9, 2014: 8:15 am MB's mom reports: "Honestly, food is the only thing I'm anxious about with MB starting kindergarten—packing a healthy variety, containers you can open—you know, we never had to worry about this before because it was half day."

Phase 2a interview date: September 2014

Age on interview date: 3 years, 9 months

Note: MB was not in aftercare, mom and MB met with me in playground, MB was too shy to talk; Mom continued to have anxiety about bagged lunches, felt that she was given no information about the lunch hour and that her questions were evaded, wished she could see the lunch room and expressed mild concern about staffing at lunch

Phase 2b interview date: not available

Phase 3 observation date: Monday, April 27, 2015

Age on observation date: 4 years, 4 months

Interview 1: 10:33AM, MB is in time out for not having cleaned up, but he cannot recall when it happened; does not recall the faces on the WB chart from P1; easily identifies the emotions on the WB chart; indicates that he is sad because he is in time out and happy because it will be a short time out

Interview 2: 11:45AM, during lunch; describes contents of lunch—yogurt covered raisins, carrots, Ritz cream cheese & cracker sandwiches, apple cinnamon raisin bread, other veg he will not eat; describes loving the yogurt covered raisins and apple cinnamon bread and that the cracker sandwiches are good, even though he doesn't like cream cheese; explains that he was sick recently and still has “a bit of a snotty nose” and “a bit of a cough”; says “I seem a bit happy because recess is my favourite part of a, a, a school day and also, also I love centre time”; goes on to restate, “I also like recess” except for when a peer makes him cry, he stutters more than usual as he recounts this; a review of coping strategies; is happy to get to press the button to turn microphone off

Interview 3: 12:52, returning from lunch recess; giggles that he is returning from recess; initially reports that recess was “super good”, then describes having to walk away from the peer who makes him cry; feels that the strategy is working; indicates feeling “a bit sad, a bit in the middle” because peer “didn't let [him] do something”; note: he played alone throughout recess

Interview 4: 2:17, doing journal work during centre time; reports feeling “good”; breathlessly describes working on a drawing—the teacher has asked children to draw what they did on the weekend, in response to the question “what are you drawing” he replies, “I don't know yet”; moves on to describe having brunch with his grandparents

Observation notes.

- While MB was able to eat with ease in the childcare setting, he had difficulty eating during snack time at school and ate minimally during lunch time.

- Over Phase 1 and Phase 3 MB was observed engaging both play with peers and solitary play. In Phase 1 he appeared to move between these two modes with ease, whereas in Phase 3 he reported feeling lonely and sad.
- In the classroom setting, the Promethean Board was a significant distraction for MB. Interestingly, when used as an instructional tool, he appeared less engaged.
- In both Phase 1 and Phase 3 MB was consistently attentive for stories, but chose not to participate in group discussions regarding the stories.
- In Phase 3, during instructional carpet time, MB was not able to be attentive and needed to move almost constantly to cope.
- Throughout the study MB expressed a love of active outdoor play.
- MB was enthusiastic to participate in the study in both Phase 1 and Phase 3, but was too shy to speak in the presence of his mother during Phase 2.
- In Phase 1 MB's self-reported wellbeing was exclusively positive or neutral, whereas in Phase 3, with the exception of when he was watching a preferred TV show, he consistently reported a mix of sadness and happiness.

RB at the Blueberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons: No.

How the child eats at home:

Eats a wide variety of foods.

Eats with pleasure.

Eats slowly.

Are there other ways you would describe the child's eating at home?

Fun; we all sit as a family and talk; kids set the table.

Child's favourite foods:

What he said when asked about his favourite birthday meal: Chinese dumplings, broccoli & asparagus. Generally likes fruit, berries, veggies, chicken... any carbs! Love to have smoothie every morning (spinach, yogurt, fruit). Hummus...

How often the child eats these foods:

We eat a well balanced diet daily.

Child's least preferred foods:

Spicy foods (eg. Indian, some Mexican dishes)

Does the child eat these foods:

How often the child eats these foods:

We generally avoid it since he won't eat it.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Same—not very picky.

Concerns about the child's eating habits at home: No.

Think we have balanced, healthy meals although it would be great to eat earlier in the evening...which we do when organized.

Concerns about the child's eating habits at daycare: No, not really.

I don't like him drinking juice, which I think they get at school [daycare].

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

Haven't thought much about it beyond thinking about what food I'll need to prepare for his packed lunch. Would have hoped/imagined they will be eating at tables and have sufficient time to eat + distraction-free environment.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

(see above) Ideal food: simple, nutritious, balanced.

Child participant interviews.

Phase 1 observation date: June 2, 2014.

Age on date of observation: 4 years, 4 months.

Awareness (where are we, who are the staff, what has transpired that day): is able to stay focused when other children interrupt interview; does not know who the adults are in the room;

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): is enthusiastic about eating at daycare; likes eating salad at daycare; describes eating

chickpeas and soup in the winter—“we eat that, I ate that, in the winter”; loves macaroni and cheese and pizza at home, especially with a movie; can’t think of any foods he does not like

Child introduced topics: is interested in listening to his own interview; chooses to draw a rainbow bowl with giant orange macaroni; asks me to draw the cooked broccoli; is very enthusiastic about our drawing project; talks about a favourite park—“I love the [farmers’] market”, “I love the mud pit”, “the whole summer now we can play in the park”; complains about the winter; wants to make multiple drawings of macaroni and cheese with broccoli; enquires about my plans for the evening; describes sleepovers with his nana, his Oma and his cousins, doesn’t recall what he eats on these sleepovers; continues drawing more pictures of macaroni and cheese and broccoli, makes one for his 2 year old brother; MB joins us and wants to practice whistling; DB wants to know if we can play music on the audio recorder; RB stays focused; DB is excited for his turn in a couple of days; RB wants to keep the art work but consents to me taking pictures of the drawings

Phase 2a interview date: September 17, 2014

Age on interview date: 4 years, 7.5 months

Transition (differences between daycare and kindergarten, feelings about the transition): other children talking over questions regarding transitions, he confirms that he has started kindergarten and he knows what room he is in

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): describes eating lunch at tables in his classroom in kindergarten; first says that he

eats the food that his parents send, then says he and his friends eat the same food at kindergarten
[they do not]

Other: does not recall WB chart; needs to go to washroom

Phase 2b interview date: October 15, 2014

Age on interview date: 4 years, 8.5 months

Food and eating (feelings about eating in kindergarten): eats after-care provided snack because he has finished his lunch at school; remembers having had a sandwich with laughing cow cheese, an apple and some carrots in his lunch; says he likes eating lunch at school; can identify faces on WB chart; is 'super happy' when he thinks of eating lunch at school

Phase 3 observation date: March 5, 2015

Age on observation date: 5 years, 1 month

Interview 1: 10:30-10:45; can easily identify faces on WB chart; is super happy "because it's movie night"; was hungry before snack, is full after snack; is feeling in the middle now because it's centre time—"I do like it and I don't like it, I do like it and I don't like it"; he likes that he gets to play with toys, does not share what he does not like about it

Interview 2: 12:00-12:15; describes having blueberries and chicken pot pie for lunch; says that he feels sad "because we can't talk at lunchtime" and "because this llllll leaked in my lunch bag"

Interview 3: 1:40; at gym, following outdoor gross motor; describes feeling super happy “because it was, it’s after gym and I love gym” and that “going outside” is his favourite part of school; describes pizza as favourite food, can’t think of anything he doesn’t like

Interview 4: 2:22; at snack table eating apple and crackers, but not carrots; favourite snack at school is “yogurt tubes and yogurt and apples and those cookies”; did not like working at the journal station “because I always wanna do centres but I just need to do my journal and I need to write... to write, write wooorrrrrdddddssss”; enjoyed learning about bees during carpet time with OISE student-teacher and is easily able to recall the content of the lesson; is going to do blocks, one of his favourite activities

Observation notes.

- Enjoys vigorous and active play in both phase 1 and phase 3. In phase 3 is observed being aggressive with children not participating in this play. This was not observed in phase 1.
- Is very interested in note taking devices in both phase 1 and in phase 3. In phase 1, staff reprimand him for this interest in technology.
- Is consistently responsive to direction in phase 1. In phase 3, RB is observed to require reminders.
- Easily copes with transitions in both settings.
- Is attentive for stories in both settings and eagerly participates in ECE-led discussion in both settings.
- Fidgets, stretches and appears bored throughout teacher-led carpet time in phase 3.

- In phase 1 he receives support of ECE seated at his table, whereas in phase 3 the lunch room supervisor speaks little English and focuses on sweeping floors and wiping tables.
- In phase 1 RB is observed to eat intently until sated, whereas in phase 3 he is observed to be distracted while eating and to put a half-eaten lunch away once he notices peers preparing to go outside.
- In both settings RB is active and attempts to engage peers during eating times when he is sated or not hungry.
- In phase 3, hand sanitizer is used in lieu of hand washing, despite the classroom being equipped with 2 working sinks.
- In phase 3 teacher reports that RB is very into writing, blocks and the computer. He reports disliking writing, loving blocks and has been observed to enjoy technology.
- Teacher reports that he is not afraid to take risks.
- In both phase 1 and phase 3 RB appears comfortable playing in groups and independently.

EB at the Blueberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons: No.

How the child eats at home:

Eats a wide variety of foods.

Is very selective about what they eat.

Eats with pleasure.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

Varied.

Child's favourite foods:

It depends on the day. Pizza. Fruit—apples, watermelon, pear.

How often the child eats these foods:

Daily (fruit)

2x month (pizza)

Child's least preferred foods:

Stews and things that are mixed

Does the child eat these foods:

Yes.

How often the child eats these foods:

Sometimes.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Unsure.

Concerns about the child's eating habits at home:

He often states that he doesn't like something before he tries it.

Concerns about the child's eating habits at daycare:

I don't get much info on his daycare eating habits.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

I am curious how it will go with him being responsible for his own lunch.

Also, he is a very messy eater.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

-not too much action in the room he is eating in

-some assistance with eating (including encouragement)

Child participant interviews.

Phase 1 observation date: June 5, 2014

Age on date of observation: 4 years, 3 months

Awareness (where are we, who are the staff, what has transpired that day): is able to describe where we are and who the main staff are; is somewhat distracted by peer interference; returns to singing throughout the interview

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): does not like eating at daycare “cause they always say be quiet”; likes to eat at home because he can talk with his moms during mealtimes—“I like to talk everytime!”; is very silly, using made up words, in response to food questions; draws a potato and explains, “I like everything, I like every single one, one when they’re any way, way, way”; draws peas; uses silly talk in response to questions about peas; does not like hot sauce; much more silly talk

Child introduced topics: immediately wants to touch the microphone and sing songs; sings baa baa black sheep; is annoyed that the recording device does not amplify his voice; is eager to draw; is working out who makes decisions for him when in the childcare setting—“cause, ‘cause, ‘cause the teachers are in charge so they could say you don’t, you don’t, you don’t need to talk to my mom ‘cause, ‘caus you don’t need to talk to our moms ‘cause, ‘cause you could already talk to the teachers”; wants to ask puppeteer preparing to give them a show to include his son; wants me to play with him

Phase 2a interview date: September 17, 2014

Age on interview date: 4 years, 6.5 months

Transition (differences between daycare and kindergarten, feelings about the transition):
acknowledges that he has started kindergarten

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): responds to questions with made up words—“arg arg arg. Aki! Oh co. MAYA!”

Other: Screaming into microphone; almost exclusively using silly talk with made up words

Phase 2b interview date: October 15, 2014

Age on interview date: 4 years, 7.5 months

Food and eating (feelings about eating in kindergarten): for snack at aftercare eats “snack that I had left over from my lunch,” and explains “I didn’t feel like it and I didn’t have time” at lunch in kindergarten; when asked if that is normal, replies, “uhhh, yeah. Um, when and when I am gonna eat the think I don’t like, it is time for us to put away our lunch”; does not like broccoli in his lunch; is silly, talking about eating paint and chalk

Other: ECE in aftercare explains that she has the children eat what is left from their lunches first, because parents were distressed about how much of the packed lunches were coming home; is easily able to identify faces on WB chart; reports feeling super happy all the time except when people “punch me or hit me or kick me or bite me”; reports that he has all of the feelings; reports liking to play race cars and batman; talks about favourite movies

Phase 3 observation date: April 24, 2015

Age on observation date: 5 years, 1.5 months

Interview 1: 10:15am; after carpet time, before snack; is readily able to identify faces on happy face chart; says “I feel happy... and silly!”; goes on to explain, “I always feel silly and happy ‘cause ‘cause I do silly stuff and I like being silly and I feel hap-hap-happiness ‘cause, I feel

happy ‘cause I, because I always get to do whatever I want at home”; says he’s still happy at school, even though he doesn’t get to do whatever he wants at school

Interview 2: 11:50; during lunch; says, “I’m still feeling happy and silly!”; is enjoying pizza day; cannot recall what is in his lunch bag; says, “I’m also telling you that some, sometimes I also really like, what I also really like is apple juice. But this is right now.”; exclaims, “I love coming to school!... Because, because, um, because, I get to play with... LB all the time and if, my house, and if I do, and if I never went to school, I wouldn’t be able to play with LB.. and with DB.”—both LB and DB are friends from phase 1 in the childcare setting who participate in the study

Interview 3: 1:30; reports “I’m still feeling happy and silly.”; when asked if he ever feels any other way replies, “Sometimes I feel sad... sad when some, some people hurt me.”; responds that this has not happened today; shifts conversation to describing planning on the rooftop garden at school; when another child attempts to interrupt, EB tells the child, “This, this is a private talk only for me.”; goes on to tell me, “I’m still getting four time outs... ‘Cause I didn’t listen to the rules. For lots of times.”; EB explains that the classroom ECE has told him “that four time outs were was ALL my centre time.”; when asked how that makes him feel he says, “I feel sad.”; immediately wants to talk about his favourite toys—cars and lego; then tells me, “Actually, um, I feel hungry...” and says that makes him feel “kind of tired, like I want to go to bed.”; goes on to say “I’m so tired” and that kindergarten is not like daycare because “now I get tired a lot”

Interview 4: 2:15; in time out; reports “I feel right in the middle... Because, because I don’t like it when I get to, get some, some of the centre time, time. I meant 4, when I said 4 time outs, Ms.

A would just let me have a time out and go and play and come back for another time out, and then come back for another time out, and another. And she didn't, so that's why I don't like that.""; asks me to put his water bottle away for him because he is not allowed to leave time out; tells me, "and I'm tired... I'm still hungry...I just want something to eat and... then... uuuummmmm... I'm not going to be able to have a snack."; he lets out a big sigh, I ask if that is because he is in time out and he says, "yeah, it's gonna be at daycare" [that he will be allowed to have snack]

Observation notes.

- EB enjoys 'talking silly' and being playfull across all 3 phases. In each of phases 1 and 3 there is an ECE who is critical of this 'beahviour', sometimes with the possible consequence of loss of snack 'privilege'—in phase 1, an ECE threatens to not serve snack and in phase 3 a quadruple time out during centre time (when afternoon snack is available) means that he has to wait until after school care to eat.
- EB is very active during outdoor play in both phase 1 and phase 3. He is particularly close with LB and RB throughout the study and also plays with a couple other children.
- In both phase 1 and phase 3 EB appears happiest during and immediately after vigorous physical activity. He is agile and fast, relative to his peers.
- He is occasionally very energetic and jumping during times when he is expected to sit.
- In both phase 1 and phase 3, EB is responsive to direction and appears to enjoy tidying up and being given special jobs to do, like throwing out garbage in the play area.
- EB's observation day in phase 3 is 'pizza day,' which the teacher explains is typically more high energy than other days. This is consistent with observations in this classroom.

- Throughout the study EB demonstrates a keen interest in listening to stories and is an active participant in ensuing discussions.
- On both observation days he is observed to be consistently called on to speak when he raises his hand
- Across both phase 1 and phase 3, EB eats with enthusiasm. In all cases he is observed to eat more food than the majority of his peers and to eat quickly, though in the classroom setting his playfulness distracts peers from eating.
- In phase 3, pizza day lunch is so exciting that many children are too distracted to finish their meals. Many children are distraught or crying and one child is inconsolable. They are not given more time to eat.
- In phase 3 the lunchroom supervisor notes that additional adults help in the other kindergarten classroom at lunch time, while she is on her own. I have observed that the lunch room supervisor in the other classroom is not able to communicate with the children.
- The lunchroom supervisor from the other classroom attempts to give me chocolates with nuts during outdoor play time. There are kindergarten children with anaphylactic nut allergies in this school.
- In phase 3 EB spends centre time in time out or playing blocks. Unlike MB, he is not distracted by the presence of technology in the room

BB at the Blueberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons: No

How the child eats at home:

Eats a wide variety of foods

Eats slowly

Are there other ways you would describe the child's eating at home?

Child's favourite foods:

Eggs, peanut butter, pasts

How often the child eats these foods:

Very frequently

Child's least preferred foods:

Does the child eat these foods:

How often the child eats these foods:

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

I feel like she eats better at daycare.

She sees the other children eating.

Concerns about the child's eating habits at home:

Concerns about the child's eating habits at daycare:

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

In the classroom with friends.

Child participant interviews.

Phase 1 observation date: June 5, 2014

Age on date of observation: 3 years, 6 months

Awareness (where are we, who are the staff, what has transpired that day): knows two of the three regular staff members; says she is four, shows three fingers, is able to figure out that she is three

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): likes to eat pasta either with tomato sauce or butter; likes to eat ‘soft’ veggies [when cooked]; knows that there are foods she does not like, but is not sure what they are; says she likes to eat “a little bit”; apple juice is her favourite thing to drink

Child introduced topics: excitedly talks about baby sister; likes to play dollies and to rock them to sleep, like her mom does with her baby sister; shares a room with her sister; looks forward to when her sister can sleep in her bed—“she’s little, but soon she can sleep in my bed”; asks me to fix a knot in her bracelet; draws a picture of her family, in it, her mouth is in a straight line, like the ‘neutral’ face on the WB charts; draws “a flipping pan” for cooking

Phase 2 interview

B is not in aftercare. After school meeting was planned with a grandparent, but the parent reported that the grandparent forgot.

Phase 3 observation date: March 13, 2015

Age on observation date: 4 years, 3.5 months

Interview 1: 10am; OB, BB's constant companion, blurts out "I want happy!" and BB repeats, "happy!"; both girls can identify the faces on the WB chart and describe 2 as "sad" and 1 as "angry"; in a small voice, BB describes herself as, "happy, very happy...because I'm goin on a boat and I'm going on a cruise..."; the two girls excitedly talk over one another about trips to Florida, Mexico and on cruises; it is not possible to direct the conversation to current feelings at school

Interview 2: 11:50am; BB is about to receive her pizza for pizza day and has just come from an assembly; indicates by pointing that she is happy, WB 4; tells me "if we, if we... I, I, I only like cheese pizza"

Interview 3: 2:05pm; BB cannot recall what she was just doing; tells me that she is about to play 'family,' OB proposes play doh instead and BB agrees; I ask how she was feeling during carpet time a minute ago and she indicates happy, WB 4; I ask her how she is feeling right now and she indicates super happy, WB 5; OB excitedly tells me that she feels the same way, BB is silent

Interview 4: 2:37pm; BB has been lying down for 30 minutes in the reading corner; she nods yes to one last interview, but is non-verbal, only nodding answers to yes or no questions; indicates that she is feeling happy, shy and tired

Observation notes.

- During outdoor play in both phase 1 and phase 3 BB alternates between active play on trikes, running or on climbing structure and make-believe play, like ‘mommy and baby’ or ‘kitchen’, with female peers.
- On both observation days BB transitions smoothly between activities and is responsive to direction. Even when kicked by a peer, BB simply tells staff and carries on playing.
- On both observation days, BB fidgets with her nose during carpet time—in phase 1 she frequently picks her nose and sucks on her finger and in phase 3 she plays with her nostrils, lips and the space in between. In some cases, for example in music class in phase 3, BB plays with her nose in lieu of participating in class activity.
- In both phase 1 and phase 3 BB primarily, and almost exclusively, plays with OB, another participant. On both of BB’s observation days, OB decides what the pair will play, who’s turn it is, and so on.
- In both phase 1 and phase 3 BB is observed to be attentive during various ‘carpet time’ activities, like story time or class lessons.
- In phase 3 a 45-minute long school assembly is too long for both BB and OB. It is the one time that BB is observed rolling around giggling on the floor.
- At lunch time in both phase 1 and phase 3, BB is observed to be very patient in waiting for her food. In both cases, she is among the last to be served.

- Staff report that just prior to the phase 3 observation day, BB and OB were separated at lunch time. Staff report that previously the two girls chatted through lunch and that the hope was that they would eat more once separated.
- In both phase 1 and phase 3, BB is observed to eat substantially less than her peers and to eat slowly during both lunch and snack.
- During outdoor play after lunch in phase 3 BB wanders alone while her friend OB plays more actively with boys. Following outdoor play, in gym class, BB picks her nose more than usual and appears to put minimal effort into gym activities.
- On the same day in phase 3, once the group has returned to class, BB appears happy to join in Play-Doh play with OB, though she had wanted to play dolls. The pair go to the reading corner together. When OB leaves, BB stays to rest for the remainder of the day.
- In both phase 1 and phase 3 BB appears to need more afternoon rest than some of her peers. In phase 1 she sleeps for 2 hours and 22 minutes (much longer than any of her peers) and in phase 3 she rests in the reading corner with her eyes closed for nearly an hour. Additionally, on OB's observation day in phase 3, BB looks tired and sits inside the 'egg chair' in the reading corner before lunch.

OB at the Blueberry Site.

Food and eating habits not available—parents did not complete survey.

Child participant interviews.

Phase 1 observation date: June 9, 2014

Age on observation date: 3 years, 9 months (based on self-reported birth month)

Awareness (where are we, who are the staff, what has transpired that day): is not aware of who any of the staff are in her room; is not able to recall what she ate for lunch; requires prompting to recall what she was playing just prior to interview

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): says her favourite food is “Pasta!” and that other foods she likes to eat are “pasta and meatballs”; tells me that her mommy and daddy like peppers and tomatoes; does not like to eat salad; says staff make her eat salad; likes to eat pepperoni at home

Child introduced topics: using Play-Doh to make pizza and cake; pretending to make pasta in the toy kitchen outside; her parents planting tomatoes in the back yard; wants to draw her parents, then turns the picture of her dad into a spider with 5 legs; talks about spiders and her brother and how, “when I was a baby I cried and cried”; does not like Spider Man, “but I like princesses and fairies, they’re so beautiful!”; drawing evolves now “daddy is not a spider! Just me and my brother!”; in response to a question about eating, answers “when I’m older I have earrings”; incorporates sad monsters into her drawing; realizes that she forgot to include her momma in her

drawing, then draws her; does not want to include anything about food in a drawing; is excited about starting kindergarten and taking a lunch box “like X-men”; looks forward to playing lego in kindergarten and going with “all [her]friends”

Phase 2a interview date: September 17, 2014

Age on observation date: 4 years (based on self-reported birth month)

Transition (differences between daycare and kindergarten, feelings about the transition): likes kindergarten

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): when asked where she eats lunch answers, “uh, beside BB”; when asked how she feels when she thinks about eating lunch at kindergarten, replies “happy card. I feel more happier.”

Other: answers almost every question with “mm-hmmm”; is easily able to identify the faces on the WB chart

Phase 2b interview date: October 15, 2014

Age on observation date: 4 years, 1 month (based on self-reported birth month)

Food and eating (feelings about eating in kindergarten): had a granola bar, bread, cheese and cucumbers left over in her lunch, explains “I didn’t have time to eat it”

Phase 3 observation date: March 25, 2015

Age on observation date: 4 years, 6 months (based on self-reported birth month)

Interview 1: 11:15am; when asked if she remembers the faces on the WB chart offers, “I’m so happy... I’m super happy... Because I’m playing with sand.”; remembers feeling happy in music class but not what she ate for morning snack; even when prompted, “I think I saw you eating a yogurt tube. Is that right? Do you remember?” OB remains uncertain if that is what she ate

Interview 2: 11:54am; during lunch; when asked about the contents of her lunch answers only, “lunch”; when asked in another way answers, “it’s a Frozen lunch box”; I comment that she has a wrap, cucumbers, hershey’s kisses and cheese strings; a peer comments “she always shares her kisses with me” to which she replies, “yeah, well you’re going to get germs... and I’m going to be sick”; then she reports feeling super happy, WB 5

Interview 3: 1:15-1:30; during centre time; lunch recess was indoors watching TV on the Promethean due to rain; when asked how she is doing, OB exclaims, “she’s not sharing that”; when asked how that makes her feel, OB points to the super sad and angry face, WB 1; I ask what can we do when two friends have one thing they both want to play with and she answers, “share... share toys”; BB explains, “when you’re done you give it back to your friend, and when you’re done you give it back to your other friend”; OB and BB continue to explain sharing and then both answer, happy, when asked how they feel; OB points to indicate super happy, WB 5

Interview 4: 1:41pm; reading buddies; when asked how she is feeling, OB points to super happy; then reports that she wants her reading buddy to read her a story about feeling frustrated, appears to be feeling frustrated and does not want to talk about feeling frustrated

Observation notes.

- In both phase 1 and phase 3, OB uses most of outdoor play time to play either ‘kitchen’ or ‘family’ type games in which she is either cooking or childrearing.
- In phase 1 OB played with many children of both genders, whereas in phase 3 she almost exclusively plays with BB, at times literally hanging off of her. In P3 OB is very quiet whenever BB is not near her.
- Transitions are smooth for OB in both phase 1 and phase 3, though she is slower than her peers on both observation days and, due to the greater expectation of independence in kindergarten, this is more apparent in phase 3.
- On her phase 1 observation day OB is observed to be eagerly attentive during carpet times, though in phase 3 she fidgets, moves around and sometimes chats with peers during similar types of activities.
- In phase 1, every time OB raises her hand to contribute to group discussions she is invited to participate. In phase 3 she raises her hand to contribute on 3 separate occasions and is not invited to participate.
- When there are songs with actions, OB participates enthusiastically in phase 1 and participates minimally in phase 3.
- In both phase 1 and phase 3 OB has a hard time remembering what happened just prior to interviews.

- In both phase 1 and phase 3 O appears tired before lunch, with droopy eyes in P1 and resting in the reading corner in P3.
- On both observation days OB is observed to eat very slowly. In P1 she is still able to eat a substantial amount relative to her peers, but in P3 this means that she eats very little throughout the entire day.
- In phase 1 OB is among the first children to go to nap after lunch. In phase 2, OB sets up a bed in the reading corner and lies down briefly after lunch. BB joins her to nap inside the 'egg chair'.

LiB at Blueberry Site.

Food and eating habits not available—parents did not complete survey

Child participant interviews.

Phase 1 observation date: June 9, 2014

Age on date of observation: not available

Awareness (where are we, who are the staff, what has transpired that day): is distracted by the light on the microphone; is not aware of the names of the staff in the room

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): favourite thing about eating at daycare is sitting with a friend; favourite thing to eat at daycare is snack; favourite snack is cookie; independently comments, “but it not... cookie is not healthy”; when asked what is a healthy snack, replies “lunch”; repeats this circular conversation two more times

Child introduced topics: wants the microphone to answer him, conversationally

Phase 2a interview date: September 17, 2014

Age on interview date: not available

Transition (differences between daycare and kindergarten, feelings about the transition): is at another school for kindergarten

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): independently offers “the teachers don’t give me my snack, only my mommy”; goes on to note “I throw my snack in the garbage”; is excited that he gets to eat lunch with peers; when asked how he feels about lunch at school replies “I’ll cry... Because my mommy pick me up so I cry”, because he didn’t get to eat with his friends

Other: is curious about why I am interested in eating at school

Phase 2b interview date: October 15, 2014

Age on interview date: not available

Food and eating (feelings about eating in kindergarten): ate all of his lunch today “and all my snack!”; feels “good” about eating at school, indicates WB 4

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Phase 3: LiB moved to a school in the Catholic School Board

Observation notes (phase 1 only, LBi moved to another school).

- During outdoor play, LiB alternates between active play on tricycle or play structure and listening to a story. Outdoors, LiB plays alone or interacts with staff, but does not interact with the other children.
- During indoor play, LiB plays super hero games with two other children throughout the day.

- LiB is attentive during carpet time activities.
- LiB eats all of his lunch and snack.

JB at the Blueberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No. She just has problems with some bread due to her surgery.

How the child eats at home:

Eats a wide variety of foods.

Eats with pleasure.

Are there other ways you would describe the child's eating at home?

She isn't picky with foods and loves to eat.

Child's favourite foods:

Chicken, hot dogs, pasta, rice and soup

How often the child eats these foods:

Often in a different way I make but with lots of different food.

Child's least preferred foods:

Mash potatoes

Does the child eat these foods:

How often the child eats these foods:

Every other week and never finish it.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Not at all.

Concerns about the child's eating habits at home:

No.

Concerns about the child's eating habits at daycare:

No.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

Not really. Just that my daughter eats a lot and want to make sure she has enough.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

Good nutrition and she always ate in class, so not to much of a matter. She gets along well with new environment.

Child participant interviews.

Phase 1 observation date: June 11, 2014

Age on date of observation: 3 years, 9.5 months

Awareness (where are we, who are the staff, what has transpired that day): is aware of staff and surroundings

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): apple is her favourite thing to eat at daycare; she also reports liking soup and pears; does not like butter; also reports liking bananas, hot dogs and Hagen Das ice cream

Child introduced topics: is shy at beginning of interview, though she has interrupted peers interviews for a turn on previous days; enquires about the microphone and drawing materials; is

very interested in the levels on the microphone; decides not to do drawing after hearing staff ask other children to clean up

Phase 2a interview date: September 17, 2014

Age on interview date: 4 years, 5 months

Transition (differences between daycare and kindergarten, feelings about the transition):
acknowledges that she is now in kindergarten;

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): indicates that she feels super happy, WB5, about eating in kindergarten; reports that apples are her favourite food

Other: multiple other children attempting to join in or talk over interview limits content; she is able to identify the faces on the WB chart with ease; J is silly with the attention and plays with answers—for example, when asked where she eats when she's at kindergarten she answers, "glasses on me" with lots of giggles

Phase 2b interview date: October 15, 2014

Age on interview date: 4 years, 6 months

Food and eating (feelings about eating in kindergarten): eats her lunch in aftercare, does not want to talk about whether or not she has enough time to eat in kindergarten, looks around to see if

staff are nearby and asks to end the interview, though she had wanted a long interview; reports feeling a little bit happy, WB 4, about eating in kindergarten

Other: begins interview by saying, “I know I’m gonna take loooooonnnnnnggg” because she wants a long interview; is not clear that she is in junior kindergarten

Phase 3 observation date: April 16, 2015

Age on observation date: 4 years, 11.75 months

Interview 1: 9:30am; identifies the middle face (sometimes referred to as ‘kinda in the middle’ or neutral) as sad; reports feeling super happy, WB 5, doesn’t know why; does not recall playing outside, immediately prior to interview

Interview 2: 11:53 am; is about to have lunch; reports feeling super happy, WB5, “’cause... I like to play outside” (outdoor play follows lunch); doesn’t know what is in her lunch; again does not feel like talking about eating at daycare

Interview 3: 2pm; indicates feeling super happy, WB 5, “’cause I go ta school”;

Interview 4: class schedule did not allow for 4 interviews this day

Observation notes.

- Throughout all three phases JB was very enthusiastic to participate and very often interrupted her peers' interviews eager to have her turn or to have a second turn, though she was consistently shy during her own interview.
- On both her phase 1 and phase 3 interview dates JB demonstrates a lot of affection for staff members, giving frequent hugs and lingering around the adults while other children play (especially outdoors).
- JB enjoys being given special jobs, like setting name place cards for lunch in phase 1 and taking the attendance to the office with a peer in phase 3.
- On both observation days, JB spends time wandering alone.
- In phase 3 JB fidgets, playing with her finger tips, finger nails and pony tail.
- On her phase 1 observation day, JB is observed to move a lot and 'crab crawl' around during carpet time (though the entire group was more energetic than usual on that day, no outdoor play in the morning due to weather). By contrast, JB is attentive during carpet time, especially with the Promethean Board, on her phase 3 observation day.
- On both observation days, JB eats intently during snack time.
- During gym on her phase 3 observation day, JB fidgets more than usual, is reluctant to play game, is quickly out of breath and opts to sit out with ECE. Once the class is skipping (one of her preferred activities) she decides to join again.
- During lunch in phase 1 JB sits at a table with a staff member who offers gentle guidance and helps with mealtime conversation. They talk about the days of the week, what they do in the gymnasium, and when Father's Day is. The staff at the other table, by contrast, is critical of the children and even calls over to critique BB for eating too slowly from the next table. When another child asks, "what's wrong?" The staff at the other table says,

“Just eat your food, I know what I’m doing.” There are two very different approaches to mealtime at this site.

- During lunch in both phase 1 and phase 3 JB eats both very slowly and very little. In phase 3, when asked if she is full, she replies, “I’m ready to go outside!”
- During outdoor play after lunch, the lunchroom supervisor from the other class once again attempts to give me chocolate with nuts.
- Transitions are smooth for JB on both observation days, though she is much slower than her peers and often forgets items.
- During phase 1 JB is observed to work very intently on the Father’s Day craft and spends 1 hour and 15 minutes playing at the water table. During phase 3 is only observed to watch the Promethean Board and play on the iPad during centre time. The classroom teacher reports, “JB’s favourite centres are all technology based” and points to the iPad station, the computer and the Promethean Board.
- It is noted that many centres popular in other classrooms, such as science table, crafts table and sand table, remain vacant in this classroom. Observations suggest that many children choose technology-based activities over hands on activities.

LB at the Blueberry Site

Food and eating habits not available—parents did not complete survey.

Child participant interviews.

Phase 1 observation date: June 11, 2014

Age on date of observation: 3 years, 6 months based on self-reported birth month

Awareness (where are we, who are the staff, what has transpired that day): likes coming to “school”; knows the name of one of the staff members

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): feels silly and says he likes to eat air planes; says he likes the chili they had for lunch; when asked if there’s any foods he likes, replies, “I’m being... feeling silly... be, be, be, be, be, be, be, be, be”; when asked if there are any foods he does not like to eat, he offers, “I like to eat tofu” and later on he reports, “I don’t like to eat bread”

Child introduced topics: LiB and LB talk about being different colours; talks about Batman; describes a spaceship—“it’s for flying and pushing bad guys”; talks about toys from the movie Toy Story

Phase 2a interview date: September 17, 2014

Age on interview date: 3 years, 9 months based on self-reported birth month

Transition (differences between daycare and kindergarten, feelings about the transition): is aware that he has transitioned

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): like's brining a lunchbox to school because, he says, "I get sweets...jelly bean and cookies"; says he eats lunch at snack centre with 3 boys he knows from daycare; indicates that he feels happy, WB 4, about lunch at kindergarten

Other: can easily identify the faces on the WB chart; identifies both WB 1 and WB 3 as angry

Phase 2b interview date: October 15, 2014

Age on interview date: 3 years, 10 months based on self-reported birth month

Food and eating (feelings about eating in kindergarten): ate sandwich from lunch for snack in aftercare

Phase 3 observation date: May 14, 2015

Age on observation date: 4 years, 4.5 months based on self-reported birth month

Interview 1: 10:21am; announces "I'm four" and describes having had "two birthdays... because one was at my grandma's, one was at my house"; ECE asks him if he wants cheese, he does; says his birthday was "just after Christmas"; easily identifies faces on WB chart and defines WB 3 (sometimes 'kinda in the middle' or 'neutral) as "kind of happy"; is not able to identify how he is feeling at the moment

LB is shy and prefers not to use the microphone. No further recorded interviews.

Observation notes.

- LB consistently plays with one or two children—MB and LiB in phase 1 and MB and, to a lesser extent, EB in phase 3. In phase 1 play is exclusively centred around super heroes and space ships, whereas in phase 3 he and his peers invent things—for example, they build something with woodchips, first calling it a trap, then a birthday cake. LB enjoys discussing the possibilities and has a glimmer in his eyes.
- LB transitions with ease in both phase 1 and phase 3.
- He is somewhat attentive during carpet times and is moderately fidgety on both observation days. Most often, he sucks on his two fingers. He is more attentive for story than for other carpet activities. Sometimes, during other carpet activities, he engages peers in play and is viewed to be disruptive.
- In phase 3 he is consistently called upon when he raises his hand.
- LB is enthusiastic about gross motor time, both outdoors and for gym class.
- In phases 1 and 2 LB is silly for interviews, but is happy to participate. In phase 3 he shares that he feels shy about the microphone and WB information is collected without audio recordings.
- During lunch on the phase 1 observation day, LB is observed to eat with focus and to eat two full servings of the hot meal. On the phase 3 observation day LB chats with peers and eats figs, raisins and a small amount of apple sauce along with a juice box.

- After lunch on the phase 3 observation day, LB is very silly, dancing like a penguin, worming his body across the floor, rolling across the classroom and crawling around. Once outside, he throws woodchips at MB and is aggressive with other children. This is the only time this behaviour is observed.
- During outdoor play the other lunch supervisor again attempts to share chocolates with nuts.
- On the phase 3 observation day, LB plays blocks and, at the same time, remains enthralled with the videos on the Promethean Board. Several centres, including play dough, magnet fishing, small wood blocks, and drama, remain vacant as the majority of the class watches videos on the Promethean Board.
- In the afternoon of his phase 3 observation day, LB looks extremely tired.

DB at the Blueberry Site.

Food and eating habits not available—parents did not complete survey.

Child participant interviews.

Phase 1 observation date: June 18, 2014

Age on date of observation: not available

Awareness (where are we, who are the staff, what has transpired that day): easily identifies all staff

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): reports that “anything” is his favourite thing to eat at daycare—“I even eat peppers!”; also likes carrots, “when they’re cooked and soft”; does not like to eat “garbage”, clarifies that “one time I had to eat this yucky stuff... it looked like garbage... it taste like garbage... I didn’t eat it. Instead of eating that, I ate... umm...um, uh, vegawarians, at, um, I ate chick peas and beans” [the vegetarian option]; “I eat the peppers with chicken. I put the peppers in my mouth, then I put the chicken in my mouth”; D does not like to eat eggs, “but I eat um, I um, um, I eat eggs are in somefing... like a cake!”; favourite snack is “cheese, carrots, chips”—is reporting the snack he just ate;

Child introduced topics: reports that RB, VB and EB are his friends; wants to draw a pizza with raw cheese, yellow cheese, blue cheese and pink cheese; his favourite pizza has cheese and

peperoni with no sauce; has to go to the bathroom!; “sometimes I have to eat pizza with pineapple on it”; “you can take a picture of them” [the drawings]

Phase 1: June 11, 2014 (during LB’s interview): First says, “I eat anything”, then adds, “I don’t eat pepper.”

Phase 2a interview: not available

Phase 2b interview date: October 15, 2014 (with EB)

Age on interview date: not available

Food and eating (feelings about eating in kindergarten): when EB is talking about not having enough time to eat during lunch time in kindergarten, DB offers, “I, sometimes, that happens to me.”

Phase 3 observation date: not available

Observation notes (phase 1 only, not available phase 3).

- During outdoor play, plays actively on play structure and being a bull headbutting with peers and also plays ‘family’ assigning a friend to be the dad while he is the baby.
- DB transitions easily between activities and is very responsive to staff direction.
- On DB’s observation day, lunch at the Blueberry Childcare Center is a happy event, especially because the one austere staff member is absent.

- During indoor play, DB enjoys both crafts and projects.
- DB fidgets and appears to find carpet time difficult.

Raspberry site participant notes

ZR at the Raspberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons: No.

How the child eats at home:

Eats a wide variety of foods.

Eats with pleasure.

Are there other ways you would describe the child's eating at home?

It varies. Picky about vegetables. But otherwise healthy appetite.

Child's favourite foods:

Meatballs and pasta.

How often the child eats these foods:

1-2 times per week.

Child's least preferred foods:

Carrots.

Does the child eat these foods:

Sometimes.

How often the child eats these foods:

Maybe once every couple of weeks. Must be cooked, not raw.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

No.

Concerns about the child's eating habits at home:

No.

Concerns about the child's eating habits at daycare:

No.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

She gets distracted. Concerned about such a young age group being put in a lunchroom environment with so many other children and only having a small amount of time to eat before being sent for play.

Have a child going from grade 1 to grade 2. Lunchroom environment has been an issue. Not eating because "not enough time" and "wants to play" has been a concern. With ZR being so many years younger I am worried.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

A balanced meal is important—veg, protein, carb, etc.

Calm environment where focus is on making sure the children eat a good portion of their meals.

Child participant interviews.

Phase 1 observation date: June 23, 2014

Age on date of observation: 3 years, 10.75 months

Awareness (where are we, who are the staff, what has transpired that day): LR answers questions before ZR, though ZR appears easily able to identify many staff members;

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): ZR arrives in time for morning snack; reports having had crackers fruit and milk for morning snack, though this is what peers are currently eating for afternoon snack; reports eating soup, meatballs and potatoes for lunch at daycare; reports that potato is her favourite food at daycare; goes on to describe liking pear, apple, cherries, grapes, coleslaw, sandwich-burger and ketchup and melon; after saying that there is no food she doesn't like, goes on to say "I like more apples and bananas" and to instruct where she wants the words written; carries on to add salad to the list; requests another interview while snacking to see how to write apple sauce, fruit and crackers; non-participants begin describing their favourite fruits and vegetables

Child introduced topics: wants me to write down her favourite foods as she tells me them; staff comment that ZR is very smart

Phase 2a interview date: September 18, 2014

Age on interview date: 4 years, 1.5 months

Transition (differences between daycare and kindergarten, feelings about the transition): initially cannot identify differences between daycare and kindergarten;

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): when asked about eating at kindergarten comments, “but now I have my lunch bag...”; cannot recall what image is on her lunch bag; does not recall what she brings to school in her lunch bag; when asked about how she feels about lunch at school, replies “in the middle” or WB3; reports liking pasta

Other: thinks that I’m at aftercare to pick her up; is interested in writing things

Phase 2b interview date: October 16, 2014

Age on interview date: 4 years, 2.5 months

Food and eating (feelings about eating in kindergarten): when asked how she feels about eating at kindergarten reports, “happy, really happy”; when asked about the contents of her lunch, first answers “superman” and then answers “peanut butter and Nutella”, both of which cannot be brought to school; once this is clarified, she goes on to describe bringing grapes, meatball, pasta and yogurt; cannot recall anything in her lunch that she doesn’t like; reports “I eat all my lunch.”

Other: is curious about my bike helmets; is curious about my interest in eating at daycare and school

Phase 3 observation date: January 8, 2015

Age on observation date: 4 years, 6.25 months

Interview 1: 10:15-10:30am; is eating 'gummies' for morning snack; reports having felt 'super sad'/WB1 earlier in the morning, saying "I wanted to go to the gym with Miss McLoud," then feeling super happy/WB5 during 'music & movement,' then sad/WB2 during carpet time "because I wanted to go outside, then "very, very happy"/WB5 because she is eating gummy bears for snack

Interview 2: 12:15-12:30pm; is "playing push, push chair," taking peers "all around the world" in their chairs while they try to eat lunch; reports feeling "very, very happy"/WB5 and "very, very laugh-y"; describes finding it funny when her lunch, pasta and sauce, fell off the table and all over the floor; when peers are moved away from her, ZR continues to report feeling "very, very happy"/WB5; remembers feeling "very, very tired" before lunch and says she feels better now, "because I ate"

Interview 3: 1:30pm; ZR requested to do interview; is excited to talk about a planned trip to Mexico with her mama/WB5; reports "I'm a little bit sad, because I want to do the duck thing, five little ducks when out one day"/WB2

Interview 4: 3:06pm; reports feeling a little bit sad/WB2 "because I miss my mama"; a second child notes "I miss my mommy too" and a third says, "well, I don't miss my mommy because I'm going home"; ZR reports that she was also feeling sad/WB 2 when playing Play-Doh "because I wanted to go to my nana's house" and wishes she could have a sleep over at her nana's house; reports feeling "very happy"/WB5 during snack and also "angry because I wanted to go outside" [an extreme cold warning has kept all students indoors all day long]; enquires about my children and my mother; reports feeling "very, very happy"/WB5 about her interviews

Observation notes.

- During both phase 1 and phase 3 ZR is enthusiastic about writing, asking me to write and working on lists together.
- In phase 3 she is very excited to see me and, initially, stays by my side in the morning. We make a deal that if she “has her normal day” she can have me write words for her at the end of the day. She is pleased.
- During her phase 1 observation day, ZR is very active during outdoor play. Her phase 3 observation day takes place on a day when there is no outdoor play due to an extreme cold weather alert. In addition to verbalizing her dismay, she is very high energy and appears to need more movement than is possible on this day.
- During both phase 1 and phase 3 ZR is observed to play with many peers of both genders both indoors and outdoors.
- During both phase 1 and phase 3 ZR enjoys taking a leadership role, for example when playing on tricycles in phase 1 and when leading her peers back to class in phase 3.
- During both phase 1 and phase 3 she enjoys make believe play she calls ‘work’. For example, in phase 1 she acts as the playground inspector and ‘studies’ ants and in phase 3 she ‘teaches’ her peers how to write during centre time.
- On both phase 1 and phase 3 observation days ZR is reluctant to tidy up after herself and requires frequent reminders to do so or refuses to stop her activity.
- On both phase 1 and phase 3 observation days ZR is wrestles and fidgets during carpet time activities.
- In phase 3 ZR frequently raises her hand to speak and is only called on once.

- During lunch on her phase 1 observation day, ZR eats vigorously and eats 5 helpings, asking politely for each subsequent serving. During lunch on her phase 3 observation day a toileting accident by a peer leaves the classroom barely supervised. Multiple children have violent disputes and many others leave partially eaten lunches at their tables and begin to play. After a trip to the washroom down the hall, ZR plays so much that she spills all of her pasta on the floor. In the now active room, ZR continues to play with the child next to her. Their play becomes increasingly animated. Eventually the pair is moving tables with food on them away from peers who are still eating and chairs with peers on them around the room. This is consistent with the play in the class during this lunch hour and continues for 11 minutes before the apparently overwhelmed lunchroom supervisor notices and separates ZR and her peer.
- On the phase 3 observation day, 4 children lay down in the reading corner with blankets and a fifth curls up in a fetal position on a small chair after lunch.
- During both phase 1 and phase 3 ZR appears to be most engaged when activities require both physical movement and cognitive engagement, for example songs with big actions or physical games that require following a story line.
- On both observation days ZR is observed to choose playing Play-Doh, memory games and at the water table.
- In phase 3 ZR is able to eat both her lunch and her school snack when supervised by both her regular classroom teacher and regular classroom ECE.
- In phase 3 the classroom ECE notes that the students are consistently “more hungry in the afternoon” than in the morning, but does not connect this to lunch time supervision.

LR at the Raspberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Eats a wide variety of foods.

Are there other ways you would describe the child's eating at home?

Child's favourite foods:

Bagels, waffles, fruit, vegetables, rice & beans.

How often the child eats these foods:

Daily.

Child's least preferred foods:

Chicken & vegetable stir fry.

Does the child eat these foods:

Yes.

How often the child eats these foods:

1-2x per month.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Same.

Concerns about the child's eating habits at home:

No.

Concerns about the child's eating habits at daycare:

No.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

Yes. I think it is highly likely that she will not eat as well as she did in daycare setting.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

Ideal food/eating environment would be if daycare continued lunch program.

Child participant interviews.

Phase 1 observation date: June 23, 2014

Age on date of observation: 3 years, 10.3 months

Awareness (where are we, who are the staff, what has transpired that day): after leading the conversation to discuss an upcoming trip to Cuba, notes that we are currently at daycare;

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): when asked about eating at daycare, LR notes “YES! I do. But, and, sometimes I, we, we, we have snack”; explains that she does not eat morning snack at daycare—“No. I eat bagel at home”; when asked if she likes eating at daycare LR replies, “no. I don’t like it when, when I eat here. I like it when I eat at home better, then I could tell them that I ate already” [referring to breakfast]; LR says there are some foods she likes better at home, when asked she replies, “sometimes I like to eat at home my, my, my good vegetables”; when asked which

vegetables, LR replies “I only know carrots aaaannnnnd... One and ahhhh bees”; says that she sometimes eats broccoli and does not eat zucchini; when asked about other things that she likes to eat at home, LR replies that she likes carrots and celery and “my favourite thing that I eat at home, the favourite thing that I like, I like the vegetables and pasta...if I put the vegetables in, in, into in the, the... pasta, it makes it more yummiier”; when asked about foods she likes to eat at daycare, LR says “um, I, uh, I, I, like it at daycare a little bit, but I like it at home a lot” ; does not like to eat soup and “mommy and daddy and s’s vegetables”; also likes to “eat bagel a lot and yogurt”; when asked about fruit, LR says “yeah, mmm, ah, I like uh ummm, the fruits I like, ummm, uh ok. Ok. I have ta go ask in my mind!” and then announces, “mmm, I like tomato”; likes red apple, draws an orange; likes to eat oranges “in different ways”; draws a lemon and a green apple; when asked if she is a fan of apples, LR replies “nooooooo” and another child reports “I like pears and strawberries!”; LR excitedly shares, “oh! Oh! Oh! Oh! I planted strawberries!”

Child introduced topics: excitedly talks about Cuba when asked where we are; says “sometimes I seem damas [women, in Spanish] and I wanna go to stay with, with the black lady”; talks about liking to go to Cuba and to stay home and play ‘laugh couch’—“when my mommy tickles me, then I laugh. Mommy says, are you, are you crying? No! I’m laughing!!!”; talks about doing flash cards with her dad at home for fun; talks about what other children are doing in the room; draws a sad person in her drawing; converses with other children who will be moving to the ‘kindergarten daycare room’ the following week; LR wants to talk extensively about her sister and ZR is becoming impatient for her turn

Note: ZR's interview on the same day followed LR's interview; during ZR's interview LR answered questions on behalf of ZR and wanted to direct the line of questioning; announces "I don't like food" while ZR is listing the many things she enjoys eating

Phase 2a interview date: September 18, 2014

Age on interview date: 4 years, 1 month

Transition (differences between daycare and kindergarten, feelings about the transition): when asked if she likes kindergarten, LR gives a subtle nod;

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): when asked if she eats at kindergarten, LR replies "yup. But you don't sleep" and goes on to say "I don't like going to bed"; in discussing lunch, LR says "but we ate, we eat ours and THEN we eat R's" [the daycare cook's]; LR announces, "I like watermelon" and goes on to share "watermelon is very juicyyyyyyy"; says she likes eating hot dogs in her school lunch and explains, "I put it in, in my lunch bag and I put it in my soup and I, I cover it up and then I eat it at school with ketchup"; also likes rice crispies in her lunch; reports feeling happy about eating lunch at kindergarten

Other: talks about liking to draw rainbows; seems to enjoy telling another child who does not have parental consent that they cannot have an interview; talks about her cat scratching her; asks about my kids and wants me to bring them to meet her; recalls meeting my youngest one day when I was collecting parent surveys; talks about her Portuguese classes; asks to look through

my purse; is excited that she has turned 4; likes going to the cottage because she is allowed to stay up late at the cottage; wants to wear the microphone cover on her nose

Phase 2b interview date: October 16, 2014

Age on interview date: 4 years, 2 months

Food and eating (feelings about eating in kindergarten): when asked what she eats for lunch, LR says “I tell him, I tell them what I want”; says that yogurt is something she gets that she wants and tomatoes are something she gets that she doesn’t always want—“sometimes, but sometimes... I don’t like eating tomatoes, sometimes I don’t like tomatoes, sometimes I do”; appears distressed and then shares, “I eated. I wanna eat everything. My, my mom and dad told me, my dad told me I need to eat everything. But every, sometime I, I can’t eat anything, um, everything, ‘cause some of, ‘cause they say it’s tidy up time for the lunch” LR goes on to say that “it’s hard, it’s hard to wait” and “never, never it’s enough time”; LR indicates that this makes her feel a little bit sad; she goes on to say “and we’re, when I get ta, get to happier, I get the, I get the, when I’m happy I get to eat all of my things”; I ask if she sometimes has enough time to eat everything, LR shakes her head no and says “never”; after further talk about kindergarten, LR explains, “when it’s the end of the day, I like eating my lunch all up” [in after care]

Other: is pleased to be able to identify her own name on my list; works to identify the names of her peers; when asked about how she feels about kindergarten, LR replies “my, my, my sister does a lot of things and she doesn’t sleep in school”; talks about daycare with a wistful tone; when asked a follow up question, if she wishes she was at daycare, LR says “a lot of days...”

Phase 3 observation date: January 29, 2015

Age on observation date: 4 years, 5.5 months

Interview 1: 9:50am; easily identifies faces on WB chart; nonchalantly indicates that she is feeling super happy/WB5; when asked if she is happy that she is going to music, LR shakes her head no

Interview 2: 11:15am; giggles at start of interview; enquires about the case for the iPad used for notetaking; is excited that her parents are coming for the concert today and that her sister is “ELEVEN!!!”; doesn’t know when her birthday is; wants to try a different face on the WB chart, I explain that she doesn’t have to and can just pick how she is feeling; she indicates that she is feeling super happy/WB 5; we talk about how she was feeling before snack, she says that she was not hungry but she was super sad/WB1 “’cause I didn’t go to library”; after talking about her sadness she is able to talk about having felt hungry before snack, saying “a li- a lot hungry”; explains that she does not like cheese, but she does like cheese strings “’cause you get to play with them”; LR is happy to talk about cheese strings; LR says “I like the ones that have white aaaaannnnd orange”; talks about loving watermelon, how her family never buys it anymore [it is winter time], and how “in, in su- in my birthday I getting watermelon”; remembers having bubbles at her birthday party and playing with her cousin; likes to have bubbles and toys at bathtime but “sometime I only do bubbles, ‘cause sometimes I’m really tired, I go to, I have to go to, I’m really tire, I go to, I have to go to, and I don’t take a bath ‘cause I’m too tired”; when asked if she is more tired now that she is at school, L answers “yeah...’cause I have to do a lot of stuff here”

Interview 3: 12:55pm; indicates that she is feeling super sad/WB 1 about lunch time; then indicates that she is feeling super happy/WB 5, “because I get to see you”; we return to talking about how she felt during the lunch break; during lunch she ate bread and butter, 1 strawberry and yogurt drink; after eating, LR reports, “...only some people could play and then a lot of people could”, she was not one of the people who could play and, she says defensively, “I didn’t do anything!”; reports that she is happy now and wants to play together during outdoor play; again talks excitedly about the school concert

Interview 4: 2:45pm; begins by asserting to a peer, “she’s talking to me!”; indicates that she was super happy/WB 5 to tell her peers where things go during tidy time

Interview 5: 3:09pm; LR requested a fifth interview and wants to do a picture; wants to draw pictures of watermelon together; indicates that she is feeling happy/WB 4; AR joins LR in the interview and the two talk about how happy they are that their families are coming to the concert and how much they like me; LR explains to AR that I will not be at the concert, LR says “she’s going to pick up her boys”

Observation notes.

- LR is very curious about the field work process in both phase 1 and phase 3. On both observation days, she is excitedly intrigued about both note-taking and recording of interviews. Additionally, on both observation days she enjoys both being interviewed

and being observed—she is sometimes territorial when other children speak with me and often comes to stand near me during various free play times.

- In phase 1, 13/16 children are present and in phase 3 26/33 children are present.
- In phase 1 LR is very active during outdoor play and engages in a wide variety of activities including playing on the slide, in the wagon, with sand and basketball. She appears comfortable playing with all of her peers. On her phase 3 observation day, LR exclusively wants to play with me during outdoor play and does not engage with her peers at all.
- In phase 1 LR enjoys carpet time and is actively engaged in songs and discussion about stories. In phase 3 LR fidgets with the corners of her mouth and the skin on her hands and plays with her hair during carpet time. She is quiet during group songs and is not called on when she raises her hand.
- In phase 1 LR plays with several peers during indoor play and enjoys using play dough to ‘make’ cupcakes, pizza and popcorn pizza and playing a mirror drawing game. In phase 3, LR is observed to have a verbal confrontation with a peer which leads to several other girls taunting her. The classroom ECE arrives and LR is happy to show her work sorting rocks. Later in the day LR engages in parallel play in the kitchen area but rejects offers to play with peers.
- On both observation days, LR transitions between activities and follows direction with ease.
- On both observation days LR is keen to do drawings or “make food on a paper” with me.
- During the phase 1 observation day lunch, LR eats slowly and makes unhappy faces until she is served fruit. During lunch on her phase 3 observation day LR devours her bread and butter, one strawberry and yogurt drink.

- On LR's phase 3 observation day, her teacher comments that she is "surprised more parents don't take their kids home at lunch." The teacher goes on to offer that "It's loud and chaotic, the kids could really use a break." She explains that the three problems at lunch are space, numbers and ratios. In her view, perhaps 24 children would be ok but there are 33 children in her class. The teacher feels that "FDK is a great transition tool for SK kids, but JK kids are just too young for full days." Eager to share her views, the teacher states that the classroom environment all day is just "too much" for the kids and "too many still need naps", especially the "late babies" [younger children]. Additionally, the teacher thinks that many of the children have bedtimes that are too late and she notes a correlation "between the food that comes in and behaviour issues." She elaborates, "All I have to do is look at the lunch and I know how they will do in terms of behaviour and school performance." Returning to her initial comment, she reports that the kindergarten teachers feel that "they should all be going home for lunch."
- During outdoor play an ECE reports that at her previous school, the Red Mulberry School (which was the initial impetus for this study), children initially had lunch in the classrooms. The teachers said they needed their classrooms for preparation time, so all five kindergarten classes ate lunch in a lunchroom together with 5 lunch supervisors. The ECE reports that the environment was "loud and chaotic", that "many of the kids could not open most of the containers in their lunches", and "many kids could not eat in that environment." The ECE says that "teachers need to realize that it is the *student's* class, not the teachers." She points out that "Kids do not have enough time to eat in a lunchroom" and exclaims, "they were only given 20 minutes!" She believes that "the board needs to do a better job of training both principals and teachers. They spend all this money on training and nothing happens. Where is the follow up?"

- In both phase 1 and phase 3, LR appears to really enjoy snack time. During phase 3 snack time many classmates are observed to note that they do not have enough food, do not have enough time to finish their food, or to report that they are hungry after snack is over. The teacher notes that three kids in her class never have enough for afternoon snack. She says that despite talking to their parents, “it is only leftovers from morning snack that keeps them going.”
- In phase 1 LR is observed to be reluctant to nap, remaining on the couch and requiring staff direction to go to her cot for nap time. In phase 2 LR describes liking kindergarten because she does not have to nap. At the same time, in phase 3 LR manages to turn a conversation about watermelon, into a conversation about bubbles, then bubble baths, then about how, since starting kindergarten, she is too tired for bath time.

KR at the Raspberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Eats a wide variety of foods.

Eats with pleasure.

Eats slowly.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

I don't ever force or require her to eat, except to say she must eat some protein, some green and some orange if she's going to eat dessert.

Child's favourite foods:

Noodles/pasta, ketchup, "candy": ice cream, sweets

A wide variety of other foods she eats and enjoys

How often the child eats these foods:

2-4x/week

Child's least preferred foods:

I don't feel aware of this—even salad sometimes works for her—it's unpredictable what she will dislike.

Does the child eat these foods:

Not applicable.

How often the child eats these foods:

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Maybe slightly less picky at daycare, likely because the other kids are doing it and food is prepared specifically with kids in mind.

Concerns about the child's eating habits at home:

Not really—if anything, she takes so long.

Concerns about the child's eating habits at daycare:

Not really.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

It's going to be a big deal for me to learn to pack snacks and lunches and take more time and energy I feel short on. I know nothing about the environment.

Also, concern re: lead levels in school plumbing along with lack of encouragement to drink to thirst while at daycare and school.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

Supervised by staff she spends other parts of the day with, with her friends and peers, in a small-ish group and quiet, relaxed setting, possibly with music on.

Child participant interviews

Phase 1 observation date: June 25, 2014

Age on date of observation: 3 years, 8.3 months

Awareness (where are we, who are the staff, what has transpired that day): calls the childcare centre school; KR likes it, cannot remember the names of the staff in the room

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): KR sometimes eats morning snack at daycare; at lunch she likes to eat “pear, macaroni and cheese, cucumbers”; she also likes “pepper... and I forgot the other stuff”; KR reports that she does not like pepperoni, oranges and apples but she does like lamb and popcorn with cheese; prompted by another child, KR reports liking candy and ice cream; she goes on to describe liking “gummy bears and gummy bunnies”, “star shaped crackers” and “strawberry, mint-flavour...star shaped cookies” and repeats, “I don’t really like apples... and I don’t really like blueberries”; we talk about how it’s ok that everyone likes different things; she says, “I love bananas” and reports, “I also bake stuff”; when asked what she thinks about food, KR answers “I think about food that it’s delicious”

Child introduced topics: KR begins by making a salad out of toy produce for me; enquires how the microphone works; KR reports, “My dad lives in Colombia, but I go... I don’t live in Colombia, but my dad does.”; she says “I have a baby brother and some big sisters and I’m a big sister”; when I note “you get to be a little sister and a big sister” KR replies, “no, I’m only a big sister” [she does not live with any siblings]

Phase 2a interview date: September 18, 2014

Age on interview date: 3 years, 11 months

Transition (differences between daycare and kindergarten, feelings about the transition): first part of interview recording lost

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): when asked about lunch at kindergarten first answers “I would choose both of the happies” then adds, “but sometimes I feel sad and in the middle” clarifying “when I’m not happy that... packs eggs for lunch”; she also explains, “I really like when I choose... If I’m in the middle, it kind of look like I’m kind of mad or something. This or happy or sadder, or sadder, or two sad, and two happies and one in the middle, I would, like, feel so much. How you’d like to feel really strong and I feel like I had ice powers or something.”

Other: KR reflects on the faces on the WB chart noting, “but you know what? Sometimes I think both of these faces look happier and not so happier.”; excitedly discusses the movie ‘Frozen’ and listening to the soundtrack at daycare

Phase 2b interview date: October 16, 2014

Age on interview date: 4 years

Food and eating (feelings about eating in kindergarten): announces, “I have my own lunch bag now”; describes “the side with Elsa, the side with Elsa is just, is um, yellow and red. The side with Elsa on it is red, ‘cause... and the picture on the side with Ana on it is blue.”; talks about nut allergies and getting pea butter; KR jokes, “I it in, um, um, I got yogurt today and I also get crackers and helmet sandwiches”, giggling; says that at lunchtime “we just eat a little bit ‘cause there’s like lots and lots of snacks”; says that at the end of the day “I bring some things home”

including yogurt and apple; says she feels “sad, sad and happy, happy” about lunch at kindergarten “because sometime my mom puts things that I really like and some things that I kinda do like and some things that I don’t like really much and sometimes things that I don’t like a little bit.”; says it makes her sad, sad “when my mom packs bad things” and she calls the things she doesn’t like “poisonous”; says it makes her really happy when her mom packs “toothpicks holding stuff that I really love, love, love, love, love.”

Other: KR says that kindergarten is more fun than daycare “‘cause they have more dress-up than the preschool room”; is excited to share that it is her birthday and she has a loose tooth; KR confides, “When my teachers are not looking at me, I climb on this table, and it’s super fun, ‘cause when no teacher are looking at me at school, I just climb straight up onto the table.”; says, “I tell everything that I can fall down from, ‘I’m too strong to fall down!’” and explains, “It’s just ‘cause my mommy made me that way.”; is happy that she got Ana and Elsa dolls for her birthday

Phase 3 observation date: January 28, 2015

Age on observation date: 4 years, 3.3 months

Interview 1: 9:00-9:15am; KR is drawing a cat; easily identifies the faces on the WB chart, identifies WB1 as “sad and kinda angry”; reports feeling happy/WB4 “because I’m at... Because I... I’m learning new things”; KR enjoys learning about “when the letters make sounds” and being at school, except for when mommy has to go; describes drawing a person wearing a dress

Interview 2: 11am; KR says she is feeling “kind of tired”; she goes on to say that she feels “kind of sick” and a little bit sad/WB2; when asked if she is hungry, KR answers “not really”

Interview 3: 12-12:15pm; it’s lunch time and KR reports having eaten “cheese and heart cookies and apples... and yogurt!”; she says she is feeling “kind of happy like that”/WB4; says she doesn’t really like yogurt and it makes her feel “in the middle kinda”/WB3

Interview 4: 2:30-2:45pm; reports having felt frustrated and “kinda hungry and grumbly hungry” during carpet time, indicates WB2; KR then indicates that she is now feeling happy/WB4 at the snack table and jokes that she can’t even make the middle/WB3 face—“I can’t even like my lips go straight out to the sides like this.”; asks for help putting shoes on

Observation notes.

- In phase 1 KR is observed to be cheerful as she says goodbye to her mom in the morning. By contrast, KR is clingy when her mom drops her off in phase 3 and tries to convince her to stay.
- KR is attentive during carpet times in phase 1. In phase 3 she is attentive the majority of the time during carpet time. She is observed to occasionally become engaged in watching her peers and is called out by the teacher to be more attentive.
- KR engages in a variety of indoor activities during phase 1, such as singing and dancing to ‘Frozen’ songs, making Play-Doh popcorn and looking at books, and during centre time in phase 3, such as the writing station, drawing and ‘the donkey ear station’. She transitions easily between these activities, though she is not infrequently visibly upset

when preferred stations are full, when she feels that her activity is copied and when she feels that the teacher has ‘taken her spot’.

- In both phase 1 and phase 3 KR is slow to transition between spaces—for example, from outdoor play to indoors, from one class room to the next, returning from the washroom, etc.
- On her phase 1 observation day her peers show signs of tiredness before nap, but KR does not. By contrast, KR is observed to rest in the reading corner before lunch on her phase 3 observation day. She had been sick a few days earlier.
- K is observed to eat full servings of everything offered in phase 1. She eats very minimally in phase 3, though the lunchroom supervisor notes that her appetite seems to be down due to illness.
- Lunch on KR’s phase 1 observation day is quiet with easy going conversation. On her phase 3 observation day, K has a verbal disagreement with a peer and later kicks the child sitting next to her and calls the child a ‘potty’ word.
- On the phase 3 observation day, 30 minutes after lunch has started nearly all the male children are done eating and are playing, whereas nearly all the female children are not.
- During lunch on the phase 3 observation day there is a large yogurt spill. The lunch supervisor attempts to keep children from that area of the class and calls for someone to come clean it up, but no one arrives while the children are still using the room.
- In phase 1, KR is observed to easily put on rain gear and transition for outdoor play, whereas in phase 3 KR is reluctant to put her things on for outdoor play and requires a great deal of assistance.
- KR engages in imaginary play during outdoor gross motor on both observation days, including playing ice cream shop in phase 1 and astronaut in phase 3. On both

observation days KR is selective about who she plays with and rejects requests to play from one or more peers.

AR at the Raspberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Is very selective about what they eat.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

Child's favourite foods:

Pasta, fruit, cheese strings.

How often the child eats these foods:

Almost daily.

Child's least preferred foods:

Meat, veg.

Does the child eat these foods:

No.

How often the child eats these foods:

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

More picky at school, as at home I offer what I know she eats.

Concerns about the child's eating habits at home:

Not varied enough, not enough protein, doesn't like trying new things.

Concerns about the child's eating habits at daycare:

Same. She doesn't eat enough calories at school.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

Concerned that she won't be encouraged to eat her lunch.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

Sitting with other children and a teacher/ECE who encourages eating.

Child participant interviews.

Phase 1 observation date: June 25, 2014

Age on date of observation: 3 years, 6.6 months

Awareness (where are we, who are the staff, what has transpired that day): at the start of interview LR wants to talk about the microphone and KR wants to offer me a salad, initially this participation appears to make AR more comfortable; AR describes us as being "in my teacher's classroom!"; when asked if we are at school or at daycare, responds that we are at school; another child screaming answers over AR makes her visibly uncomfortable; AR is aware of all of the main staff members in her room; eventually KR's interjections annoy AR and she screams "leave us alone KR!"

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): AR makes silly sounds and noises when asked about food; offers that she likes bananas and pineapple; has a hard time answering what she likes for snack—AR asks, "to get all

different kinds and heat here?” then says “I can’t think to it” and breaks into song; when asked what she likes to eat at home, AR answers “mmmmm, plain pasta only” and asks peers to tell me what they like to eat

Child introduced topics: AR talks about enjoying “home days”; AR enjoys making silly sounds into the microphone; AR sings “let it go!”

Phase 2a interview: not available, AR was home sick

Phase 2b interview date: October 16, 2014

Age on interview date: 3 years, 10.3 months

Transition (differences between daycare and kindergarten, feelings about the transition): AR nods that she likes kindergarten

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): likes that her parents pack “strawberries, pretzels, pita chips” in her lunch, adds “and hummus”; AR wishes that cheese strings were not in her lunch and offers, “I don’t like cheese at all”; she also does not like peppers; says she has “lots of time” to eat at lunch; AR says that she prefers the lunch that she used to receive at daycare “because it’s tastier”; says that lunch at school makes her happy/WB4 “because I really like my baby sister”; tells me “there’s usually food left in my lunch”, when asked how much AR replies, “a lot”

Other: AR is very quiet throughout the interview; AR is easily able to identify the faces on the WB chart; says that the middle face/WB3 “must be serious”

Phase 3 observation date: January 7, 2015

Age on observation date: 4 years, 1 month

Interview 1: 10:45am; easily identifies faces on the chart; indicates that she is super happy/WB5 because it is snack time; she is eating breadsticks; nods in lieu of speaking for the majority of responses

Interview 2: 12-12:15pm; just after lunch, when asked what she just did, AR answers, “um, did a happy thing”; indicates that she was happy/WB4 during lunch, super happy/WB5 during play time, and super happy/WB5 about carpet time

Interview 3 (not recorded): 12:45-1pm; AR is laying down on the carpet; a child says that they are tired, AR says that she is more tired; indicates WB3

Interview 4: 1:15-1:30pm; it’s centre time, AR is drawing herself with a red kite, red is her favourite colour; says that before she was “really, really hungry” and indicates WB3; when asked what she had for lunch she replies “Easter egg!”; says the treat made her super happy/WB5

Interview 5: AR requested this interview; describes building “a city”; is eating applesauce; indicates feeling WB3 when she had to take apart her city, feeling WB4 to come to snack table, and feeling WB5 to be eating snack

During LR's interview, January 29, 2015: AR joins LR's interview and reports feeling super happy/WB 5 "because I'm going to see my mommy at school!" [for the school concert]

Observation Notes.

- On her phase 1 observation day, AR cries at various points in the morning—when her mom drops her off, when the group goes for a walk and before lunch. One of the ECE's expresses concern about how AR will manage the transition to kindergarten because she is so young, she is very sensitive and she consistently takes a big nap during naptime.
- AR does not cry at all on her phase 3 observation day.
- AR is observed to lay down to rest on several occasions on her phase 3 observation days and she repeatedly complains of being tired. Teacher notes that AR sometimes takes a nap in the classroom. The lunchtime supervisor, who is also an ECE in the before and after school program, comments that AR has been less tired since a recent change where she is no longer in the before and after school program. The ECE also notes that AR is "less tired and has fewer meltdowns" since this change.
- On her phase 1 observation day, AR plays a variety of make believe games with a wagon and with sand during outdoor play time. During this play, she consistently physically touches base with a preferred staff member. On her phase 3 observation day there is no outdoor play due to extreme cold.
- On both her phase 1 and phase 3 observation days, AR is observed to attempt to be attentive during carpet time activities. On both days she is observed to become fidgety and start to pick her nose within the first 5 to 10 minutes of any carpet time activity.

- On both observation days AR is observed to enjoy singing and making silly sounds and noises, the latter especially in the final few hours of the day.
- On both observation days AR eats a very small amount of food. On her phase 1 observation day she appears sated with the amount of food she consumes. On her phase 3 observation day she comments that she is hungry or really, really hungry on numerous occasions.
- Throughout the study, AR does not ever report a negative emotion, though she is observed crying, appearing to feel sad on many occasions and angry on one occasion.
- AR reports feeling WB3 when she is hungry or tired, though she has identified WB3 as serious.

SR at the Raspberry Site.

Food and eating habits not available—parents did not complete survey.

Child participant interviews not available.

SR declined verbal assent at the end of his phase 1 observation day. He was not in aftercare during phase 2 and did not wish to participate in phase 3.

Observation notes (phase 1).

- SR's mother chats with staff about allergy testing.
- During outdoor play, SR plays very actively with other children and frequently invites staff to join him in play.
- SR is happy to chat with me throughout the day, but declines verbal assent for a recorded interview.
- SR mostly plays alone during indoor play.
- Staff report that SR does not have allergies, but his mother fears that he will develop allergies because it is in her family. The daycare accommodates the food restrictions.

Huckleberry site participant notes

JaH at the Huckleberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Eats a wide variety of foods.

Eats quickly.

Eats with pleasure.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

Child's favourite foods:

Ham, cheese, cucumbers.

How often the child eats these foods:

Several—a few times a week.

Child's least preferred foods:

Green veggies—broccoli, spinach.

Does the child eat these foods:

How often the child eats these foods:

Once a month or a little more if I get creative.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Less picky as at this age group they go with the flow.

Concerns about the child's eating habits at home:

No.

Concerns about the child's eating habits at daycare:

No.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

No.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

Clean tables and chairs in a designated area—the same set up daily.

Child participant interviews

Phase 1 observation date: July 7, 2014

Age on date of observation: 4 years, 3.5 months

Awareness (where are we, who are the staff, what has transpired that day): JaH knows the name of his daycare and the staff in his room at daycare; he speaks very quietly

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): says at daycare he eats “uhhh, cheese and, and, macaroni and cheese. They make that sometimes. And pizza.”; describes really liking bread and cheese, watermelon, cake and muffins; chick peas are the one food he gets at daycare that he does not like; JaH says he really likes to eat

grilled cheese at home “because you can rip it up and dip it inside the ketchup and bite it!”; also likes pancakes, carrots, celery and cucumber

Child introduced topics: none

Phase 2a interview date: September 19, 2014

Age on interview date: 4 years, 6 months

Transition (differences between daycare and kindergarten, feelings about the transition): JaH says he likes kindergarten, very quietly; he says that it’s different from daycare

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): JaH says kindergarten is different from daycare “because, because it has lunch boxes”; says his lunch box has zombies on it; JaH says he likes “bringing lunch from home... because it tastes better” and his mom packs him watermelon, cheese strings and cheese and noodles; describes having a specific spot with his name on where he sits for lunch; indicates that thinking about lunch in kindergarten makes him feel WB3 or ‘normal’

Other: spells his name for the start of the interview; enjoys talking about zombies and why they lose articles of clothing

Phase 2b interview date: October 17, 2014

Age on interview date: 4 years, 6.75 months

Food and eating (feelings about eating in kindergarten): JaH says that kindergarten is “it’s um, funner than, um, the little school” and goes on to explain “um when we’re um, because you get to bring lunch boxes”; talks about the zombies on his lunch box; JaH says that he likes “the bars” that his mom sends in his lunch, but not the jelly and that he usually doesn’t eat the bananas; indicates feeling WB3 when he thinks about eating lunch at school; describes that he does not like it when the lunch supervisor tells him to finish his chili, then indicates that he feels WB3 or neutral about it

Phase 3 observation date: May 28, 2015

Age on observation date: 5 years, 2 months

Interview 1: 10:28am; JaH easily identifies the faces on the WB chart and calls WB1 angry and WB3 thinking; JaH is sitting at the snack table eating cherries and feeling super happy/WB5 “because my mom gave me cherries”; describes feeling happy/WB4 when he was sent for a time out; when asked if he ever feels any way other than happy, JaH says “when I fall and I’m bleeding I get this, like that” indicating sad/WB2; he then says, “angry”; I ask when he gets angry and he says, “when I don’t get cherries”; when asked what his favourite things are for snack, JaH begins to chant about cherries, then amends it to “carrots and cherries”; says he favourite thing for lunch is “a jam, jam sandwich”; indicates that he never gets anything in his lunch that he doesn’t like to eat

Interview 2: 11:33am; during lunch; JaH is eating a jam sandwich and has carrots next to him; he says that he does not like to eat carrots; when I ask about him saying that he liked carrots earlier,

JaH says “I actually forgot” and that he does not like to eat carrots; says that he only ever gets jam sandwiches for lunch; talking about my sandwich, JaH says that he does not like tomato

Interview 3: 1:30pm; JaH is playing a game he calls ‘flappy bird’ and explains “it’s called, you supposed ta, cross these villains and then kill the king and queen”; indicates that he feels all of the faces, then, in response to questions, explains that he feels sad/WB1 “because this, because there’s a crash and my robot can’t go like, like this eh! Eh!” and he feels happy/WB4 “because I have this and this could break those brick walls”, super happy/WB5 “because, because it could also break metal; then he says that he was just being silly when he chose so many faces; JaH then explains that he was feeling angry/WB1 when he had to go to the coat hooks for time out again

Interview 4: 2:37pm; during outdoor play; JaH has a huge smile on his face and indicates feeling super happy/WB5; talks about how his mom lets him climb on top of play structures that the teaching staff do not let him climb on; says that his favourite part of the day was when he was angry “because I like being angry... it makes me relaxed”

Observation notes.

- JaH demonstrates intense concern for nature in both phase 1 and phase 3. In phase 1 he cries when the staff take a snail he has found and in phase 3 he cries when a classmate puts their hand in the fish tank, explaining that he thinks that the child’s dirty hands will “kill the nature”.
- JaH is both happy and active during outdoor play in both phase 1 and phase 3.
- In both phase 1 and phase 3 JaH is not responsive to direction.

- In both phase 1 and phase 3 JaH is attentive when stories are being read. In phase 3 he is not attentive during other carpet times.
- In phase 1, JaH uses lunch and snack times to eat. In phase 3 JaH eats enthusiastically during snack and quickly eats a sandwich during lunch. Once he is finished eating in phase 3, JaH interferes with classmates who are still eating.
- In phase 1, JaH appears to become annoyed several times and is observed to poke one peer and to shove another. In phase 3 JaH is observed to engage in many aggressive incidents—before study start time (9am) he bit another student; between 9-10am he threw a girl to the ground, mounted her and searched her mouth with his finger, shoved another girl and kicked the first girl; between 10-11am he poked a boy, punched another boy, hit the first girl again, aggressively dismantled a structure other children were building, knocked the first girl to the ground again and cried about a boy putting his hand in the fish tank; between 11am-12pm he cries when he loses at tic tac tow, pretends to bite a child who is still eating lunch, kicks over a block tower and hurts a student he believes that he is protecting from another student; between 12-1pm he slaps a boy, hits the first girl in the face, hits the child he was previously attempting to protect and punches the air in the middle of circle time; between 1-2 pm he plays a hitting game with a friend, then is able to play building a ‘trio’ set; between 2-3pm he threatens to destroy the structure the first girl is building, hits the girl he was previously trying to protect and is eventually sent to the office for hurting another female classmate.
- In phase 1, when JaH was observed to become annoyed with a peer, each time an ECE immediately moved to work with him on strategies for expressing annoyance. In phase 3, JaH was in a classroom with 1 teacher and no ECE. The teacher attempted to use a variety of techniques, including additional outdoor time, teaching lessons outdoors, using

breath work visualization techniques and incorporating students expressed interests, but, as the lone adult in the room, was not able to offer one-on-one attention, as had been offered by the ECEs in phase 1.

- On the phase 3 observation day the classroom teacher was called to deal with a family emergency in the afternoon. Due to the unforeseen nature of the situation, the classroom was supervised by a series of 3 different adults over a 2-hour period. During this time, the 3 supervising adults relied on my knowledge of the classroom routines and students to safely manage the classroom.
- JaH is observed to do well when he is outdoors and can be very active, when he is deeply engaged in nature (for example describing an ant colony), when he is listening to a story, when he is building and when he has direct one-on-one attention from a staff member. In his phase 3 classroom there is 1 teacher and no ECE. The teacher uses breathing techniques, applies his interests in all areas and attempts to offer support. Much of the teacher's time is spent offering JaH support, nonetheless, observations from phase 3 are entirely unlike those from phase 1.

AH at Huckleberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Is very selective about what they eat.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

Child's favourite foods:

Macaroni & cheese, chicken nuggets, broccoli, chicken, rice, shrimp.

How often the child eats these foods:

1-2x/week each

Child's least preferred foods:

Certain vegetables: green pepper, red pepper, spinach.

Does the child eat these foods:

No.

How often the child eats these foods:

Not applicable.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Less picky.

Concerns about the child's eating habits at home:

None.

Concerns about the child's eating habits at daycare:

None.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

No.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

Child participant interviews.

Phase 1 observation date: July 7, 2014

Age on date of observation: 4 years, 0.5 months

Awareness (where are we, who are the staff, what has transpired that day): AH is aware that we are at the daycare, speaks very quietly and does not respond to questions about who the staff are

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): AH says macaroni is her favourite thing to eat at daycare; she likes bread with butter on it for snack; AH says that macaroni is her favourite dinner to eat at home, her favourite snack is "uhhhhhmmmm, mmmm, cookies!" and her favourite breakfast at home is "peanut butter and jelly sandwich"; she does not like to eat tomatoes both at daycare and at home; she also does not like to eat celery, which was served today at daycare

Child introduced topics: she wants to draw a picture of people

Phase 2a interview date: September 19, 2014

Age on interview date: 4 years, 3.75 months

Transition (differences between daycare and kindergarten, feelings about the transition): AH refers to kindergarten as “a bigger school” [note: it is just down the hall from the child care centre]; says kindergarten is different from daycare because “you have to close the doors when you’re in the bathroom!”; when asked about other changes enthusiastically responds “because we are bigger, and at school, and we know where it is and, the little school... Isn’t... Because we have to know when we get home, and the little school and when we’re going home and the big school...Because we’re going home at different times”

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): AH explains “We have to, have to bring our own lunch to kindergarten ‘cause they don’t have lunch here. We have to, so we have to, we have to bring our own lunch.”; she nods that she likes eating lunch at kindergarten; AH likes bringing her own snack to kindergarten because her parents pack her “all kinds of cookies!”; she is easily able to identify the faces on the WB chart and indicates that she feels super happy/WB5 when she thinks about eating lunch at kindergarten

Other: AH speaks with more confidence during this interview

Phase 2b interview date: October 17, 2014

Age on interview date: 4 years, 4.75 months

Food and eating (feelings about eating in kindergarten): AH says that kindergarten is more fun than daycare “because we get to bring our own lunches and I get to pick.”; AH offers that she gets break with butter and cheese and cookies in her lunch; in response to a series of yes no questions she indicates that she does not get fruit, veggies, or other things in her lunch; AH says, “I don’t usually eat everything” and explains “it’s because I’m not hungry”; she indicates that she is super happy/WB5 about lunch at school because she gets to choose

Phase 3 observation date: May 19, 2015

Age on observation date: 4 years, 11.75 months

Interview 1: 9:25am; AH is excited about her upcoming birthday and birthday party; she is easily able to identify the faces on the WB chart; AH indicates that she is feeling happy/WB4 about playing outside; female classmates join in a conversation about birthdays and ages

Interview 2: 11:45am; immediately after lunch, AH is playing with blocks on the carpet; AH says she is feeling happy/WB4 “because I ate my lunch”; she says she ate “cheese and butter” for lunch; I ask if it was on bread, AH nods yes; I ask if she ate anything else, she shakes her head no; she says that she did not have anything to drink “because I did not fill my water bottle up”; AH describes what she is building—“we’re making a condo. And we’re trying to make an elevator to attach to here and make it go up.”

Interview 3: 2:30pm; AH has been playing for about 15 minutes as the cashier at the ‘snack bar’ in the dramatic centre; when AH is asked how she is feeling, NH makes comments suggesting

violence, nonetheless AH reports that she is feeling happy/WB4 “because I get to play”; she says she is selling “goldfish [crackers] and apple juice,” which is a snack she sometimes likes to have

Interview 4: 2:40pm; AH says that she wishes that she got candy in her lunch and sounds sad

Observation notes.

- AH enjoys rich make believe play in both phase 1 and phase 3 including dress up and kitchen in phase 1 and carwash, condo building and snack bar in phase 3.
- AH appears very engaged in indoor activities on both observation days, such as heart crafts in phase 1 and making dandelion honey in phase 3.
- In both phase 1 and phase 3 AH pulls at her skirt or puts her skirt in her mouth when she seems to feel uncomfortable.
- AH enjoys active outdoor play with female peers on both observation days. On both days she also takes 5-10 minutes at a time to attentively observe the play of older male children playing. On her phase 3 observation day, AH carefully waits for moments staff will not notice her engaging in more daring play on “forbidden” parts of the play structure.
- On her phase 1 observation day, AH is visibly tired during lunch and appears to almost fall asleep at the table. During snack, after lunch, she appears to still be tired. On her phase 3 observation day AH takes a rest in the sand in the playground after lunch.
- On her phase 1 observation day AH eats a full meal. On her phase 3 observation day AH eats a cheese sandwich and a rice crispie square, a chocolate chip cookie and an oreo cookie.

- During carpet activities on both observation days, AH neither fidgets nor actively engages in activities. With the exception of sharing circle in phase 3, she does not offer to speak or raise her hand at all.
- In both phases, when there are opportunities for music and dancing, AH participates enthusiastically.
- In phase 3, when her teacher offers the daily sharing circle (when children can share their centre time creations with peers) AH signs up to share her condo structure and confidently explains it to her peers.
- In phase 3, AH is extremely affectionate with her ‘grade 3 reading buddy.’ While the group is outside collecting dandelions, AH runs with her buddy, sits on her buddy’s lap, is carried by her buddy and kisses her buddy’s hand. Her buddy is receptive to all but the last of these displays of affection.
- On her phase 3 observation day, the teacher notes that “this is an unusually calm day because two of the major players are missing,” referring to participants JaH and JoH who are absent. On this day it is very clear the extent to which the teacher uses child led programming.

NH at the Huckleberry Site.

Food and eating habits not available—parents did not complete survey.

Child participant interviews.

Phase 1 observation date: July 8, 2014

Age on date of observation: not available

Awareness (where are we, who are the staff, what has transpired that day): NH is aware of where we are but not who the staff are at daycare; corrects me with his understanding that we are at school, not daycare [we are in the childcare centre, in the same building as the school]

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): when I ask what he eats at daycare, NH replies “Oh, I eat... You know what my brother always eats sweet candy”; later, when I ask again, NH tells me about his plans to build lego stairs; when I ask what he ate for lunch, he says he doesn’t remember; when asked about what he is excited about eating at daycare, NH answers “salad and macaroni and bread” which is what the children ate for lunch that day; later he jokes “I’m going to eat you up”; when asked if there are any foods at daycare that he does not like to eat, NH responds “I don’t want to eat no peanuts” [the childcare centre is a nut free facility]; NH tells me “He makes me nothing that’s yummy” in talking about his father and goes on to say “He makes me rice, that’s all he makes”; after a third chat about Star Wars, NH tells me that his dad makes sausages “with egg and shrimp, that’s all. And corn” to go with the rice; his favourite snack food is goldfish crackers; when asked if there are other snacks he likes, NH responds “light sabers. I like light saber toys

and light saber candies and light saber toys.”; NH tells me that Darth Vader “likes to eat nothing”; when asked what he thinks healthy foods are, NH says “rice and vegetables”; when asked about vegetables, NH describes “Oh, corn, broccoli, and... you know, dinner time vegetables... you know ‘lauchus’? They are a kind of thing that they’re really big, that are high, and they have things that are on and things that are really big.”; tells me that his favourite food is “pasta soup”

Child introduced topics: NH has built my likeness out of lego and explains it to me in detail; talks about the fact that both of his parents work and who his mother works with; talks about having a dog that he is going to keep “forever” which he clarifies as meaning “the whole summer” and tells me that the dog has scratched his face; is interested in why the recording microphone is not amplifying our voices; tells a story about a ‘bad dog’ in a cartoon; offers me one of his Star Wars stickers and talks extensively about the characters; NH wants to give me ‘the queen’ sticker; NH asks about my mom; tells an intricate story about robot robbers; he shows me a cut he got earlier, and talks more about Luke Skywalker and Darth Vader

Phase 2a interview date: September 19, 2014

Age on interview date: not available

Transition (differences between daycare and kindergarten, feelings about the transition): NH says that kindergarten is different than daycare “because it’s... because it’s... because I don’t know”;

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): when asked if he likes to eat lunch in kindergarten, NH replies “no, no, I don’t

eat...”; when asked how he feels about eating lunch at kindergarten, NH replies “Nothing!” then when asked for clarification he says, “I do like it”; NH has indicated WB3 as his feeling about lunch at kindergarten

Other: NH tells me his brother’s name and that his brother “likes to watch Lego”; JoH interjects several times, eager for his turn; NH wants the microphone to take our picture; JoH notes appear in his profile

Phase 2b interview date: October 17, 2014

Age on interview date: not available

Food and eating (feelings about eating in kindergarten): NH says he “bring[s] some food home” after eating lunch at school; talks about making guns and swords with his food; when asked in a variety of ways about what he brings back home from his packed lunch, NH replies with “leftover,” “food,” and “I don’t know”; NH also does not know what is left in his lunch today; NH is easily able to identify the faces on the WB chart; when asked about how he feels when thinking about lunch at school, NH answers “I don’t know”

Other: mostly wants to talk about things that he has built; NH describes having seen me before I walked into the aftercare room and enquires about which of his peers I know

Phase 3 observation date: February 11, 2015

Age on observation date: not available

Interview 1: 10:15-10:30am; NH begins by saying “I remember everything”; NH easily identifies the faces on the WB chart, he identifies WB1 as angry and attempts to make a ‘straight mouth’ face for WB3; NH yells “Hey stop! Stop everybody!” feeling crowded by peers interested in the microphone; decides that WB3 is concentrating and indicates that he is feeling WB3

Interview 2: 11:55am; NH wants me to put the microphone on the tripod he has seen used another day; NH talks about devices used for recording our interviews; NH reports feeling happy/WB4 “because I love candy” and he had candy in his lunch; NH reports only having eaten the ‘fruit pack’ gummies in his lunch; he was observed eating other items, when asked NH replies “I don’t know. I don’t remember.”; NH reports having felt WB3 while eating his lunch; describes having felt hungry before lunch, when asked what that felt like NH replies “angry”/WB1 “because I wanted to eat everything”

Interview 3: 1:30pm; NH reports feeling WB3, when asked how come he replies “I don’t know” then explains “I’m bored”

Interview 4: 2:45pm; NH shows his artwork; NH reports feeling super happy/WB5 and runs to play in the snow

May 19, 2015: during AH’s p3 interview, NH interferes with interviews making mean comments and joking about violence, nonetheless AH reports feeling happy

Observation notes.

- On his phase 1 observation day, NH cries for about 10 minutes when his dad drops him off. Initially he cries, “I want my mommy and daddy.” Later, as staff console him, he cries, “I want my mommy.” During the course of his phase 3 interview he also discusses missing his mom.
- On both his phase 1 and phase 3 observation days, NH is consistently very engaged in building projects, especially using Lego and Trio building sets.
- On both observation days NH is active and minimally responsive to direction during outdoor play.
- On his phase 1 observation day, NH is once observed to kick and punch the air when frustrated. On this occasion, an ECE helps him to cope with his frustrations.
- On his phase 3 observation day NH engages in rough play and frequently disrupts his peers’ activities—between 9-10am NH bangs two pots together during the national anthem, rough houses another boy and, NH and JoH rough house another boy during outdoor play and are disruptive during drama and dance class; between 10-11am NH throws another child’s food during snack time; between 11am-12pm NH enjoys playing with Trio, sharing his creations during sharing circle and eating lunch; between 12-1pm NH is active and happy during outdoor play, traps a female peer against the mesh of the play structure, wrestles AH to the ground (she is not a willing participant) and is disruptive during carpet time (NH requires one-on-one attention, so the rest of the students wait while the teacher attempts to help NH work through emotions); between 1-2pm NH leans on teacher comfortably for the remainder of carpet time, does crafts, spins a ‘lazy Susan’ with crafts fast enough that items fall off the sides, reads quietly with JoH in the reading corner; between 2-3pm NH continues to read, then in the last half hour NH hits a girl in the face with his snow pants, uses a toy to hit another boys, loudly mocks

and mimic's JaH (who is crying because JoH has been sent to the office) and pulls AH's hat off so hard that she stumbles backward.

- In both phase 1 and phase 3 NH eats with focus and vigour during lunch time.
- NH does not snack on his phase 1 observation day. On his phase 3 observation day NH enjoys eating fruit gummy bears for snack.

GH at the Huckleberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Eats a wide variety of foods.

Is very selective about what they eat.

Eats slowly.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

Often picks just one food off of plate, but over a week eats a variety.

Child's favourite foods:

Mac & cheese, fruit.

How often the child eats these foods:

Mac & cheese: 2-3 x per week, fruit: every day.

Child's least preferred foods:

Lentils. Never eats onions, mushrooms, peppers (unless too small to notice).

Does the child eat these foods:

Not really: picks out the parts he likes (potatoes, veggies).

How often the child eats these foods:

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

Less. Staff says he eats everything.

Concerns about the child's eating habits at home:

Not a lot. He's improving. Used to refuse meals completely, but now always eats something off plate. Still always asks for mac & cheese, but eats a variety of food groups.

Concerns about the child's eating habits at daycare:

No.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

Yes. I don't know what to make for lunch. GH isn't so fond of sandwiches (usually just picks out the inside). Will miss hot daycare lunches.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

If all the other kids eat their whole lunch, GH would likely follow suit.

Child participant interviews.

Phase 1 observation date: July 8, 2014

Age on date of observation: 3 years, 9.25 months

G declined his phase 1 interview

Phase 2a interview date: September 19, 2014

Age on interview date: 3 years, 11.6 months

Transition (differences between daycare and kindergarten, feelings about the transition): GH says he likes kindergarten and it's different because "it's, uh, it's... it's a shorter time to tidy up" and "there's different books"

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): GH likes bringing "the different lunch that comes in your lunch box" because "because... .. you get to take the fruit out"; GH explains that "I got ta, well one day I got goldfish [crackers] and another person got goldfish" and he likes it when he and his friends are eating the same thing; GH enthusiastically likes the things he gets in his lunch, though he cannot remember any of the things he gets in his lunch; GH indicates feeling right in the middle/WB3 about lunch at school

Other: GH easily identifies the faces on the WB chart; he is excited to talk about "learning about letters" and "all the sounds"; he explains that he knows all the letters in his name

Phase 2b interview date: not available, GH was absent

Phase 3 observation date: June 4, 2015

Age on observation date: 4 years, 9.25 months

Interview 1: 9:30am; ECE is helping GH wash up after a fall; he is easily able to identify the faces on the WB chart; ECE talks about the zones of regulation; GH indicates feeling blue or sad/WB2

Interview 2: 11:35am; during lunch; interview did not record; GH indicated WB3 and was almost non-verbal for interview

Interview 3: 1:16pm; GH says “we can do it, we can do it laaaaaterrrrr”

Interview 4: 2:15pm; GH is working on building a space ship and explains, “it can go anywhere, even in space... and it outer space!”; when asked how he’s feeling, GH replies “I think I’m still in the middle”

Observation notes.

- On his phase 1 observation day, GH is attentive during stories and responds to questions. On his phase 3 observation day, GH is repeatedly not called on when he has his hand raised over the course of the day and is less responsive to direction.
- GH is patient during transitions on both observation days.
- On his phase 3 observation day, teacher notes that GH is sensitive and cries when he gets stuck on a word during reading or when he loses a game. GH is observed crying when he loses a race and when he lands on a snake in snakes and ladders. He does not cry on his phase 1 observation day.
- On his phase 1 observation day, GH plays giddily with his peers during outdoor play and with focus during indoor play. On his phase 3 observation day GH wanders between activities both indoors and outdoors. On two occasions the ECE helps him to focus on a task during centre time.

- On both observation days, GH fidgets with his nose and mouth during carpet times, picking his nose and eating it exclusively on his phase 1 observation day.
- On the morning of his phase 3 observation day, GH has a fall that requires a band aid. The classroom ECE cleans his wound, talks him through his tears, and helps him to rejoin outdoor play.
- During gym class on his phase 3 observation day, GH finds the electronica the gym teacher is playing too loud and stands in the corner of the gymnasium covering his ears. His classroom ECE finds him and holds his hand as they walk around the gym until he is ready to participate in the games.
- During gym class on GH's phase 3 observation day, 3 other boys are observed to be playing their own game while the class is meant to be playing a particular version of tag. Gym teacher notices and tells the 3 particularly energetic children that they have to go to sit in the office for the remainder of gym class. The classroom ECE asks the gym teacher if there might be another solution for these 3 active children. The gym teacher says that there is not and sends the boys to sit in the office.
- On his phase 1 observation day GH eats two full servings of lunch and eats snack. On his phase 3 observation day GH eats a banana directly before lunch, then eats $\frac{1}{4}$ of a small pizza slice.

MH at the Huckleberry Site.

Food and eating habits not available—parents did not complete survey.

Child participant interviews.

Phase 1 observation date: July 9, 2014

Age on date of observation: not available

Awareness (where are we, who are the staff, what has transpired that day): MH says that we are at “school” she does not know what it is called and she is not sure what the staff members names are

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): MH says “some bagel and some cheese, and we eat lots of things at school; she says her favourite thing to eat at daycare is “bagel and butter”; MH indicates that she never gets anything to eat at daycare that she does not like to eat; when asked what her favourite thing to eat at home is, MH says “you know the last one, it was only me and my sister... She made pasta for me... It had no sauce”

Child introduced topics: MH begins by telling me that she has a big sister and a big brother; she shows the scab she is picking off

Phase 2a interview date: not available, she was absent

Phase 2b interview date: October 17, 2014

Age on interview date: not available

Transition (differences between daycare and kindergarten, feelings about the transition): when asked about the differences between daycare and kindergarten, MH replies “daycare’s right there” and points down the hall; she says kindergarten is “much fun than daycare... Because if you go to another different class, you might get things, and you might get some things, and you sit down for snack.”;

Food and eating (feelings about eating in kindergarten): MH says that snack in kindergarten is “much funner”; when asked if she has enough time to eat in kindergarten, MH replies, “half, half” and clarifies that she has time to eat half of the things in her lunch; she doesn’t remember what is left in her lunch; when asked how she feels when she doesn’t finish her lunch, MH says “it makes me feel... it makes my tummy rumble” and adds “it makes my tummy more grumbly”

Phase 3 observation date: May 22, 2015

Age on observation date: not available

Interview 1: 9:30am; MH is at the math station; MH is easily able to identify the faces on the WB chart, she calls WB1 angry and says WB3 is “kind of neutral”; she says that she feels happy/WB4; she also says she feels happy/WB4 about kindergarten; she explains her math work; when asked how she feels about math, she replies, “happy”/WB4; when asked if she ever has any feelings other than happy, she replies “no”

Interview 2: 11:35am; lunch started at 11:20, MH started eating at 11:33; MH says she is “good”; on further enquiry she explains, “I was trying to find my water bottle but I can’t find my backpack and my water bottle”; earlier she had told the ECE that she was going home for lunch, but she was not on the list to go home for lunch; MH explains “ I just had my lunch. I had my lunch in my bag but I though my daddy didn’t pack me lunch...so... I decide to go home” [she does have her lunch in front of her]; for lunch she has “rice and chicken fingers”; when asked about the other items in her lunch, MH replies “I have a little bit of rice and nothing else. I just have rice and chicken fingers.”; when asked how she feels right now, MH answers “When I was walking to school I feel this much happy.”; when asked again how she feels “right now while you’re sitting here eating your lunch” she indicates super happy/WB5; when asked how she felt when she couldn’t find her lunch, she says she felt angry/WB1

Interview 3: 1:37pm; MH talks about working on phonics and using erasers for mistakes; she says that she is working on the letter T and that she is happy/WB4

Interview 4: 2:45pm; we had a big talk about her favourite foods prior to recording; M says “my favourite fruit things are apples and... I thought... I think my, my favorite food is apple and mango.”; MH notices and likes my lip gloss, then asks about my favourite foods; I talk about enjoying stir fry; MH replies “You know what? You know, you know what? When I’m grown up I’m going to have pizza with a little bit of vegetables.”; she clarifies that now “When I go to the pizza store, I always like cheese pizza.”

Additional interview June 4, 2014: during lunch; MH describes what she is having for lunch, “I have cucumber with a little butter spread on bread”; she has taken her sandwich apart and is

eating it all in pieces, she says “I like to eat it all together, sometimes, sometimes. But when I grow up I like to put it in half”; she also has a rice cake ‘tube’ and says “it tastes like blueberries, kind of. I don’t really like it but when I try it, it will taste so good. When I try it.”; MH describes other things in her lunch—“I have my strawberries,” “I like this kind of granola bar but is says peanut-free, so we X-marked the peanuts so that means I can have this.”; she also has orange and juice that its “pear, apple, grapes and cherry”; MH says she likes ‘bear paws’ but her daddy says she can’t eat them because four years old is grown up; MH goes on to say “when I’m grown up I could eat sushi but when I’m a baby I could eat bear paws”; MH talks about liking to “eat candy after dinner”; when asked what she likes to have for dinner, MH says “My mommy, when I have playdate dinner with her, ma and my friend are gonna go to the store and buy macaroni and cheese, so me and my friend could eat macaroni and cheese for dinner.”; talks about the Disney store and toys she likes in that store, liking to dress up with makeup and wanting to have a tablet; when asked about dinner on normal days, MH tells me she gets beef but she only likes it “when the beef doesn’t have any skin on it.”; she says, “I don’t really like tomatoes... but when I’m older enough, I can eat tomatoes.”; MH reports liking “carrots toasted and broccoli toasted”; MH asks about what kinds of fruit I like, says her favourite fruit is “mango and peach”; talks about the movie Frozen and going to the movie theater and getting popcorn and juice and says “really I can’t eat M&Ms...cause they have sesame seeds”; she says that she is allergic to peanuts and they make her throw up; talks about liking kit kat chocolate bars

Observation notes.

- On both her phase 1 and phase 3 observation days MH listens attentively during carpet time activities and is responsive to direction.

- On both observation days MH plays with a small group of girls during free play activities and limits interaction with other children.
- On her phase 3 observation day there is a supply teacher and MH and a handful of students stay physically close to the ECE as much as is possible throughout the day.
- The supply teacher on MH's phase 3 observation day does not appear to be familiar with the play based learning central to the FDK program. The supply teacher tells the children, "I don't do play time, I do math time," he scolds a child for asking what he means when he demands respect, and he has the kindergarten children working on math sheets throughout the morning.
- MH participates in an Ojibway language class on the morning of her phase 3 observation day. She excels at colour identification and outperforms children in higher grades.
- On both observation days MH eats approximately half her lunch and is eager to have me join her for lunch. She is very interested in my eating habits and interviews with MH are very conversational.
- On her phase 1 observation day MH sleeps longer than the other children at nap time. MH does not show signs of tiredness on her phase 3 observation day.
- MH eats a variety of foods at snack time on both observation days.
- MH states that she only ever feels happy/WB4 but she reports feeling angry/WB1 when she couldn't find her lunch bag.
- On her phase 3 observation day, MH's classroom ECE reports that both the ECE and the teacher give up their lunch breaks to provide additional staffing during the lunch time. Even on the observation day, when the classroom teacher is engaged in training in another part of the school, the teacher comes to assist at lunch time. On the observation day, when there is a supply teacher, the ECE has also given up her breaks to ensure that

there is always a familiar adult in the room. On several occasions, students cry during or after interactions with the supply teacher and the ECE is able to console the children and attempts to help the supply teacher understand the routines in the kindergarten classroom.

- During gym class, the gym teacher denies a 4-year old child's request to use the bathroom—the ECE intervenes and takes the child to the washroom.
- MH plays actively and with delight during both indoor and outdoor gross motor activities on both observation days.
- MH appears engaged and focus when engaged in fine motor tasks such as crafts and 'reading' in phase 1 and working on math and letters in phase 3.

JoH at the Huckleberry Site.

Food and eating habits (Parent Survey).

Foods the child is unable to eat due to allergies or for religious or cultural reasons:

No.

How the child eats at home:

Eats a wide variety of foods.

Eats slowly.

Sometimes refuses to eat.

Are there other ways you would describe the child's eating at home?

Child's favourite foods:

Meats, seafood, fruits, chili, soup, lamb & rice, ice cream, beans, corn, pasta, rice.

How often the child eats these foods:

Pretty frequent.

Child's least preferred foods:

Cooked broccoli, cauliflower, peppers.

Does the child eat these foods:

Yes.

How often the child eats these foods:

One or two times a week.

Is your child more or less picky about what they eat at daycare, compared to what they eat at home:

At daycare they say JoH is a pretty good eater.

Concerns about the child's eating habits at home:

Dinner time, he doesn't seem as hungry for dinner.

Concerns about the child's eating habits at daycare:

Not really.

Do you have any concerns regarding the food your child will eat at school or the school eating environment itself:

JoH eats best when supervised more closely, now that he will be eating a packed lunch I worry whether he will eat as well as he did at daycare.

What do you think would be the ideal eating environment for your child as they begin full day kindergarten:

I pack him warm lunch in thermos containers with foods (healthy home cooked) he likes.

In a supervised environment where he may get the help to open any packaging or containers.

Child participant interviews.

Phase 1 observation date: July 9, 2014

Age on date of observation: 4 years, 1.5 months

Awareness (where are we, who are the staff, what has transpired that day): JoH says we are at "school" and his school is called "daycare"; is able to name all the staff without pause;

Food and eating (favourite foods at daycare and at home, feelings about eating at daycare and elsewhere): JoH reports eating "bread, apple, chicken" and "yogurt and juice" at daycare; JoH

says that yogurt is his favourite food at daycare; says that there is nothing he gets at daycare that he doesn't like; hot dogs are his favourite thing that his grandma makes for him to eat; spaghetti is his favourite thing to eat that his mom makes; says green freezies are his favourite snack food and hamburgers are his favourite breakfast, lunch food and dinner food; jokes that he likes to cook hamburgers on the floor; JoH draws a picture of many hamburgers

Child introduced topics: JoH talks about going fishing with his dad and talking in Spanish with his dad; JoH talks about wanting to learn more Spanish; jokes about eating worms; talks about how the microphone works

Phase 2a interview date: September 19, 2014

Age on interview date: 4 years, 3.75 months

Note: JoH joined NH's interview

Transition (differences between daycare and kindergarten, feelings about the transition): JoH joined in NH's interview after this discussion

Food and eating (differences between eating at daycare and kindergarten, feelings about eating in kindergarten): JoH says "it's another", explaining that lunch is not supervised by his teacher; he explains that the kids "don't eat the same food" and that he "ate spaghetti"; JoH says he eats spaghetti and then he eats sandwich; he says that his favourite thing about lunch at kindergarten is "spaghetti, meatballs, chicken, turkey, soup and meat"; he also says that spaghetti is his least favourite thing about lunch at kindergarten; when asked if there is anything else he'd like to say about eating lunch at kindergarten, JoH says "I eat goldfish [crackers], a drink, even some... I

eat some grapes” and he adds “I even eat some seaweed”; JoH report feeling super happy/WB5 at lunch

Other: JoH talks about his brother—his age, his name, the movies that he likes; JoH is territorial when a third peer tries to join the interview; JoH describes having to be careful of the ‘fresh pack’ in seaweed snacks—“and at the bottom, there’s something that’s... that makes the seaweed fresh. And at that, it’s so poisonous. So, you can’t open it or you get sing.”; he is easily able to identify the faces on the WB chart

Phase 2b interview date: not available, JoH was absent

Phase 3 observation date: May 24, 2014

Age on observation date: 5 years old (less a day)

Interview 1: 9:44am; JoH is easily able to identify the faces on the WB chart and identifies WB1 as angry; says he is feeling happy/WB4; Jo is drinking a strawberry yogurt drink, has a strawberry yogurt tube from McDonalds in the other hand and has just eaten an apricot; he also has a cinnamon raisin rice cake and chips; JoH turns the microphone off after describing his snack

Interview 2: 11:19am; JoH says he’s working on a “model” of a “robot” with “a tree” at the top; when asked how he’s feeling, JoH replies “sweating” and puts his structure on the table; when asked how he feels about his structure, JoH says “good”; when asked how he felt about talking with the teacher shortly before, JoH replies “angry” and goes on to explain “cause she wouldn’t

let me eat my ring pop”; JoH exclaims that he felt “a lot angry!”; conversation confirms that building his structure helped him to calm down

Interview 3: 1:25pm; JaH tries answering on JoH’s behalf and asserts, “I know what I feel like! I know what he feels like today!”; another child exclaims, “It’s almost his birthday!”; A exclaims, “It’s my birthday today!”; after excitement, interview resumes; JoH says he is feeling angry/WB1 “cause, ‘cause AH bit me”; with further conversation he explains that it was, “cause I was budding” and “I pinched her then bit her”; NH interrupts with loud noises; multiple children talk at the same time; JoH says, “I want to talk into this” [the microphone]; I ask what he does with big feelings and JoH replies, “um, I, I, I fight,” then after a pause he adds, “or ask my words or tell”; when asked if that helps him with his big feelings, JoH says “it does help”; by the end of the interview, when asked how he is feeling, JoH replies “um.. this is actually excited! Um, I’m that one now” and he confirms that he is super happy/WB5 because “get my turn on the microphone!”

Interview 4: 2:30pm; JoH initially announces, “I’m done, I don’t want to do it anymore” then, when a peer eagerly attempts to ‘take his turn’ decides that he wants to do the interview; he tells me about the chocolate dipped, “chocolate rainbow smartie” bar he is eating; JoH says that before he was eating ring pops; JaH again begins to attempt to answer questions on JoH’s behalf; I ask JoH to tell me how he is feeling, he indicates that he is feeling happy/WB4 and JaH yells, “I WAS GOING TO SAY THAT!”

Observation notes.

- On his phase 1 observation day, JoH enjoys both extensive play in the dramatic centre and active outdoor play.
- On his phase 3 observation day, JoH has an extremely difficult time coping in the classroom setting. During outdoor play, when the teacher is able to engage him in discussing nature (e.g. tracing a trail of ants) or direct him in vigorous physical activity, he appears extremely happy.
- On his phase 3 observation day JoH struggles to follow direction, even during outdoor play. Between 9-10 am JoH throws wood chips in one girl's face and pours water on another. Between 10-11 am JoH and JaH have a disagreement, JoH threatens to kick JaH in the genitals and hits him, after which they appear to resolve the matter. At 11 am, when the classroom teacher attempts to use a game of Simon Says for class participation, JoH screams, growls and barks at her. At the beginning of lunch time (11:23 am) JoH chases a female student around the room, pulls her to the ground by the back of her neck, then searches pockets while she is on the ground. He explains that he believed that she had stolen his ring-pop. She had not. At 11:33 he has an altercation with AH, also regarding the ring-pop. When the lunch supervisor attempts to speak with him, he screams in her face. He is calmed when the lunch supervisor offers to tell the class a story. During the lunch hour JoH also elbows the girl who's pockets he had searched, threatens to hit AH and hits AnH. Between 1-2 pm, after positive time outside, JoH hits a female classmate on the walk inside and he and AH bite one another. Between 2-3 pm, after having had snack, JoH is both self-deprecating ("I'm always so dumb") and critical of peers and the teacher (using the words "idiot" and "freaks") during sharing circle. When a peer attempts to take a flower from the class aquarium, both JoH and JaH react

strongly—JaH screams, “stop killing mother nature,” and JoH yells, “God’s mother is mother nature!”

- JoH eats enthusiastically during both lunch and snack time on his P1 observation day. On his P3 observation day, he spends much of the lunch concerned about a ring-pop. Later, he is unable to eat his lunch (pasta and sauce) because he is engrossed in the story told by the lunch supervisor. JoH eats most of his lunch during snack time (2:15-2:45).
- On his P1 observation day, JoH appears exhausted before nap and sleeps longer than his peers (even after the lights are on and children are playing around his cot). On his P3 observation day, JoH yawns frequently and appears visibly exhausted throughout the afternoon.
- On both observation days, JoH demonstrates a keen enthusiasm for story time. On his P3 observation day, the library and story time appear to be the only indoor activities that he enjoys.
- On his P3 observation day his teacher comments, “he can’t sit still. It’s the same since September,” and notes that he consistently has a high proportion of sugary snacks in his packed lunch.

AnH at the Huckleberry Site.

Note: At the time of phase 1 recruitment AnH was enthusiastic to participate and her parents offered consent, but she was not eligible to participate because she was enrolled to start kindergarten at another school. During phase 2 AnH did attend another school, but returned to the Huckleberry School prior to phase 3. With her parents' consent, AnH participated in group interviews with peers and observational data was included in analysis. Nonetheless, AnH's participation was informal.

Appendix H: Site Notes

Table 30: Site setup.

	Blueberry	Raspberry	Huckleberry
Childcare lunch	Catered	On site cook	Catered
Participation rate	72.72%	62.5%	100%
School snack program	Yes	Yes	No
Hot lunch program available at school	Yes	No	Yes
Frequency of hot lunch	5/week	N/A	2/week
Hot lunch available to kindergarten children	No	N/A*	Yes

*The study year (2014-2015) was the first year of FDK at the Raspberry school. The previous year many of the children in ½ day kindergarten attended the on-site daycare and had hot lunch provided by the on-site cook.

Blueberry site notes

- 9 participants, 1 child's parents submitted consent after phase 1 was complete. 3 other eligible children. In each case the child was eager to participate, but the parents did not consent. For 2 of these families, study materials were translated into the parent's first language and familiar staff members spoke with them about the study. The 3rd child was consistently dropped off and picked up by an older sibling or cousin and it was not possible to communicate with parents or guardians.
- At the Blueberry Childcare Centre, all but one of the staff promote a calm, family style meal setting during lunch time. At each of two U-shaped tables, a staff member sits with the children and eats with them while other staff bring food to the tables. Foods are served in a well thought out order and children are free to serve themselves. Staff help to guide appropriate conversation and maintain a warm environment during the meal. One of the staff members who sometimes works with the children during lunch is both critical and controlling during the meal times. Both the feel of the table she is supervising and the room, in general, is quite different when she is present.
- Examples of the above: At Blueberry childcare centre, one of the staff is gentle and encouraging at lunch time while the other one uses a much more critical and controlling approach. Both approaches were observed, though often the child being observed was at the latter table. For example, staff R comments, "The kids are really slow today!" Staff T replies, "Yeah, because they're eating, they're all eating really well today." A couple minutes later R announces, "That's enough, lunch is over." And turns out the lights for nap, though some children are still eating. T attempts to recover the positive tone and announces brightly, "That's a great lunch!" At snack the same day, R announces that OB

has too much snack and that “the group will be stuck inside if they wait for her to eat”.

(OB’s P1 notes)

- At the Blueberry School, kindergarten students and participants are divided among two classrooms. Both classrooms are equipped with a Promethean Board, iPads and computers. While the technology appears to be used effectively in one of the classrooms, in the other classroom the Promethean Board is used to show children’s songs and shows during centre time with the effect that both participants and other children only participate minimally in hands on activities. Additionally, children who are more drawn to technology are not guided to other activities. Some children in the class, including participant JB, are observed to exclusively engage with technology during centre time.
- Also, at the Blueberry School, one of the lunch supervisors repeatedly offers chocolates with nuts during outdoor play.

Raspberry site notes

- There are 16 children registered in the preschool room at the Raspberry Childcare Centre. 3 are not eligible because they are too young and will not be starting kindergarten, 5 are not eligible either because they will be away during phase 1 or will not be attending the Raspberry School, and 8 are eligible. 5 families consent to participation, though one child declines verbal assent at the end of phase 1. In 2 of the 3 families who did not participate, one parent was interested and the other declined participation. The vast majority of the children not participating repeatedly ask to participate.
- The Raspberry Childcare Centre is the one site with an on-site cook. The cook is keenly aware of the children's preferences, and works to provide meals that are nutritious and challenge their palates. The children appear to adore her.
- The children sit at two tables, each attended to by one staff member while other staff bring food to the room. The staff serve the children, are gentle and encouraging, and help to maintain quiet conversation.
- On KR and AR's phase 1 observation day, ECE reports that most children do not nap, but under the DNA they are required to give the children quiet time. Children appear tired and/or uneasy before nap, appear to be napping at the end of nap, and report having napped. Among participants, only ZR appears to not need a nap.
- On phase 3 observation days some children are observed napping in each of the three kindergarten classrooms.

Huckleberry site notes

- The Huckleberry Childcare Centre did not have additional staff to help with food provisioning during lunch and snack times. At this site, the staff were engaged in setting up and serving food during eating times and were not able to sit with or stay with a set of children during eating times.
- JaH, NH and JoH (though JoH did not require additional support in P1) each benefited from support when they were frustrated or sad on their phase 1 observation days. In phase 3, they were in a classroom with 1 teacher and no ECE. This was the only classroom with no ECE in the study. In order for any one of them to receive one-on-one attention, the rest of the class remained essentially unsupervised. Each of these 3 participants had a very difficult time coping with the kindergarten classroom and observations in this particular classroom were unlike those in any of the other settings.
- The teacher in the class with no ECE repeatedly expressed her concerns regarding the model in her class. She conveyed that it was difficult, if not impossible, to teach, observe, take notes on cognition and behaviour and manage behaviour. She noted that JaH, NH and JoH, in particular, needed a level of support that is not possible to provide in a classroom with no ECE. This teacher advocated a classroom with 20 students, one teacher and one ECE. Months after study completion (March 2, 2016), this teacher sought me out to reiterate this sentiment. She explains that, in the class of hers I had observed, the smaller class size means that the class is more individualized so more conflicts arise. Theoretically, this gives more opportunities for social negotiation but, she explains, because there was no classroom ECE there was insufficient staffing to offer this guidance. The teacher advocates “better ratios” and insists that “parents need to pressure

for better ratios because the current model is not tenable” and “teachers are considered selfish when they push for better ratios.”

- At the Huckleberry School, challenges with the gym teacher (who sent children to the office for being rambunctious in the gym and denied children washroom and water breaks) and a supply teacher (who appeared unfamiliar with play-based learning, had kindergarten children do math sheets all morning and who’s approach left many children in tears) underscored the importance of the ECE in the kindergarten setting.

Appendix I: Food Consumption Tables

Blueberry Child Care Centre Phase 1 Lunch Food Consumption Table

Table 31: Blueberry Child Care Centre Phase 1 Lunch Food Consumption Table

Name	Food Served	Food Consumption	Observation
MB	chicken-veggie stew, bread, milk, cantaloupe	MB appears sated after eating most of his bowl of stew, drinks a little milk, then eats bread	Stew is offered first, then milk, then bread. Cantaloupe is offered after the meal
RB	chicken-veggie stew, bread, milk, cantaloupe	Eats most of a bowl of stew, 2 glasses of milk & cantaloupe	Once sated RB starts making faces, attempting to engage peers who are still eating
EB	hamburgers (veggie burger option), frozen cooked carrots, broccoli & cauliflower, milk, pineapple	carrots, broccoli & cauliflower, 1.5 hamburgers, another serving of veg, milk, pineapple	EB eats vigorously, RB does not eat the overcooked broccoli, one staff member is critical both of children who “eat too much” and of children who “eat too little”
BB	hamburgers (veggie burger option), frozen cooked carrots, broccoli & cauliflower, milk, pineapple	eats less than 1/2 burger, small amount of veg, 2 glasses of milk	Staff member at this table offers positive reinforcement for food choices, for e.g. eating broccoli
OB	salad, whole wheat pasta, meatballs, tomato sauce, milk & apples	salad, meatballs, 2 servings of pasta	OB has a hard time getting salad on fork, but persists; eats meatballs quickly with enthusiasm; eats a full serving of pasta and most of a second serving
LiB	salad, whole wheat pasta, meatballs, tomato sauce, milk & apples	meatballs, noodles, salad, milk, apple	
JB	brown rice, bean & tomato chili, milk, pear	chili, milk, rice, pear	JB eats very little chili, asks for more rice despite not having eaten any, drinks milk, eats some rice, enjoys pears
LB	brown rice, bean & tomato chili, milk, pear	2 servings of chili, 2 servings of rice, milk	LB eats with focus and is eager for seconds
DB	beef stew with broccoli, cauliflower and carrots on rice noodles, milk and pineapple	3 servings of stew with noodles, milk and pineapple	DB eats intently; clears plate without prompting

Blueberry Child Care Centre Snack Food Consumptions Table

Table 32: Blueberry Child Care Centre Snack Food Consumptions Table

Name	Food Served	Food Consumption	Observation
MB	crackers, bananas, milk, water	bread (from lunch), banana, crackers and milk	Staff express dismay at the quality of snack
RB	crackers, bananas, milk, water	crackers, milk and banana	one staff member insists that children at her table must eat banana before they can have bread, staff at the other table does not
EB	cucumber, carrot, apple juice	cucumber, carrot, apple juice	
BB	cucumber, carrot, apple juice	3 carrot sticks, apple juice	BB eats less than her peers
OB	corn chips, salsa, juice	corn chips, juice	
LiB	corn chips, salsa, juice	corn chips, salsa, juice	
JB	toast, cream cheese or no nut butter, juice & chocolate croissants	toast, juice, chocolate croissant	JB eats intently
LB	toast, cream cheese or no nut butter, juice & chocolate croissants	toast, juice, chocolate croissant	
DB	carrots, cheese, corn chips, rice cakes, juice	small amount of cheese	

Blueberry Child Care Centre Snack Food Consumptions Table

Table 33: Raspberry Child Care Centre Phase 1 Lunch Food Consumption Table

Name	Food Served	Food Consumed	Observations
ZR	beef chili with veggies and beans, quinoa, milk, apple, pear, strawberry, honey dew	5 helpings of chili and quinoa, milk	eats vigorously and asks “nicely” for each subsequent serving
LR	beef chili with veggies and beans, quinoa, milk, apple, pear, strawberry, honey dew	1 serving of chili, many servings of apple	eats chili slowly, making unhappy faces, smiles when she is served apple and eats many servings
KR	chicken-noodle and veggie soup, egg salad sandwiches, cut cucumber and red peppers, milk, pear, apple and pineapple	chicken-noodle and veggie soup, egg salad sandwiches, cut cucumber and red peppers, milk, pear, apple and pineapple	ate all portions of her lunch
AR	chicken-noodle and veggie soup, egg salad sandwiches, cut cucumber and red peppers, milk, pear, apple and pineapple	cut veg, cut fruit, milk	
SR	bread, half hard-boiled egg, apple, soy milk	bread, half hard-boiled egg, half glass of soy milk	

Note: SR’s mother believes that he may develop allergies and, therefore, has the childcare centre prepare special meals for him.

Raspberry Child Care Centre Snack Food Consumption Table

Table 34: Raspberry Child Care Centre Snack Food Consumption Table

Name	Food Served	Food Consumed	Observations
ZR	apple sauce, banana, plum, graham crackers	apple sauce and graham crackers	
LR	apple sauce, banana, plum, graham crackers	NA	
KR	celery sticks, no nut butter, goldfish crackers, milk, apple, pear	celery sticks, no nut butter, goldfish crackers, milk, apple, pear	eats everything, including fruits she had said she did not like
AR	celery sticks, no nut butter, goldfish crackers, milk, apple, pear	goldfish crackers, tiny amount of no nut butter, 1 bite of apple, 1 bite of celery, glass of milk	
SR	caraway crackers, celery sticks, apple, pear	caraway crackers	

Huckleberry Child Care Centre Lunch Food Consumption Table

Table 35: Huckleberry Child Care Centre Lunch Food Consumption Table

Name	Food Served	Food Consumed	Observations
JaH	grilled cheese, mini pizza, carrot and celery sticks, plum, juice	grilled cheese, toppings from pizza, milk, plum	
AH	grilled cheese, mini pizza, carrot and celery sticks, plum, juice	grilled cheese, carrot sticks, pizza, 2 glasses of juice, plum	
NH	macaroni and cheese, salad with beans, bread & butter, milk, clementines	1 serving of salad, 2 servings of macaroni and cheese, bread and butter, milk, clementine	eats with vigour
GH	macaroni and cheese, salad with beans, bread & butter, milk, clementines	2 servings of macaroni and cheese, two slices of bread, small amount of salad, clementine	eats with vigour
MH	chicken, bun, carrot, milk apple	bun, 1 carrot stick, milk, apple	is eager to share mealtime with me
JoH	chicken, bun, carrot, milk apple	chicken, bun, carrot, milk apple	JoH serves himself, makes meal into a sandwich, eats vigorously

Huckleberry Child Care Centre Phase 1 Food Consumption Table

Table 36: Huckleberry Child Care Centre Phase 1 Food Consumption Table

Name	Food Served	Food Consumed	Observations
JaH	bagel, cheese, juice	bagel, cheese, juice	makes his snack into a “zombie sandwich”
AH	bagel, cheese, juice	juice	AH is still groggy from nap during snack
NH	bread, tuna paste, apple juice		does not eat any snack
GH	bread, tuna paste, apple juice	1/2 piece of bread with tuna, 2 cups of apple juice	
MH	bagel, juice, apple	2 bagels, apple, juice	
JoH	bagel, juice, apple	bagel	decides not to eat apple because JaH is ready to play

Blueberry School Phase 3 Food Consumption Table

Table 37: Blueberry School Phase 3 Food Consumption Table

Name	AM Snack	Lunch	PM Snack
RB	-bagel with cream cheese, mini carrots, cheese flavor rice crackers -RB eats bagel & crackers	-chicken pot pie, blueberries, cheese -RB eats ½ his pot pie & some blueberries	-carrots, apple slices, rice crackers -RB eats crackers & apple
BB	rice crackers, yogurt tubes, cucumber slices -BB eats 1 cracker & 1 yogurt tube	-pizza day -BB eats less than ½ a slice of pizza	-BB naps during snack
OB	-frozen yogurt tubes, orange slices, multigrain crackers -OB eats ½ a frozen yogurt tube	-fruit pouch, granola bar, orange juice, chicken wrap, cucumber, Hershey's kisses, cheese strings -OB eats fruit pouch, 2 bites of wrap, 2 bites of cheese, all the chocolate	-cupcake for classmate's birthday -OB eats cupcake
JB	-frozen yogurt tubes, 1/2 bagel, cream cheese mini packs, orange slices -JB eats yogurt tube	-macaroni with beef, multiple other items (not seen, she does not recall) -JB eats some macaroni with beef	-JB does not snack in the afternoon
EB	-marble cheese, Triscuit crackers, banana -EB eats everything	-pizza day -EB eats 1.5 slices of pizza & 1 juice box	-EB does not eat afternoon snack
MB	-marble cheese, soda crackers, carrot sticks -MB goes to snack station, eats very little (watching Promethean)	- 1 small pita break, 1 sweat pea, 2 cucumber slices, 2 celery sticks, 2 carrot sticks, mini ritz cracker package, yogurt covered raisins -1/3 of pita break, a few Ritz mini crackers	-MB does not eat afternoon snack
LB	-LB turns down banana offered at snack time	-sandwich, apple slices, apple sauce, crackers, raisins, figs -LB eats figs, raisins, 2 spoon fulls of apple sauce	

Raspberry School Phase 3 Food Consumption Table

Table 38: Raspberry School Phase 3 Food Consumption Table

Name	AM Snack	Lunch	PM Snack
AR	-carrot sticks, sliced marble cheese, packaged bread sticks -AR devours bread sticks	-pita chips, hummus, blueberries, Easter chocolate -AR eats blueberries, 1 pita chip & chocolate -AR complains of being hungry immediately after lunch	-AR eats apple slices and goldfish crackers from home
LR	- breadsticks, cut cheese, cucumber, cut apple -LR eats cucumber slices	-bread & butter, yogurt drink, strawberries, cucumbers, goldfish crackers, clementines -LR eats very little	-LR eats goldfish crackers
ZR	-ZR eats “gummies” from her lunch bag	-ZR eats a small amount of past -spends lunch time playing “push, push chair”	-carrots, milk, digestive crackers, apple slices -ZR eats everything served for snack
KR	- 1/4 bagels with jam & cream cheese, orange slices, baby carrots -KR does not go to snack centre	-cheese strings, yogurt, cookies, apple slices, lemonade -KR eats apple slices, opens yogurt, smells it, makes a face then spills it, eats cheese string when prompted by staff, then eats cookies	-KR does not snack in the afternoon

Huckleberry School Phase 3 Food Consumption Table

Table 39: Huckleberry School Phase 3 Food Consumption Table

Name	AM Snack	Lunch	PM Snack
GH	-Sunripe fruit bar & banana (finished 10 minutes prior to lunch)	-a couple bites of pizza	-GH complains of being hungry, there is no afternoon snack option
MH	-yogurt, granola bar	-rice, chicken fingers, cucumber	
NH	-gummy bears	-chicken, croissant, gummies, peach	
JoH	-apricot, yogurt tube, yogurt drink, ring-pop lolly-pop	-JoH eats a few bites of Alphabits -JoH is focused on story told by the Lunch Supervisor	-cinnamon raising rice cake, red apple, corn chips, chocolate covered, rainbow chocolate chip granola bar
JaH	cherries	-white bread with jam & butter	
AH	-3 spoonfulls of yogurt, Rice Crispy square, Oreo, chocolate chip cookie	-cheese & butter sandwich, pear	