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Community – University Institute for Social Research

***Full-Time Kindergarten in
Saskatchewan, Part Two:***

**AN EVALUATION OF FULL-TIME KINDERGARTEN
PROGRAMS IN THREE SCHOOL DIVISIONS**

**by Nazeem Muhajarine, Trina Evitts, Maureen
Horn, Jody Glacken, and Debbie Pushor**



Building Healthy Sustainable Communities

Community-University Institute for Social Research

CUI SR is a partnership between a set of community-based organizations (including Saskatoon District Health, the City of Saskatoon, Quint Development Corporation, the Saskatoon Regional Intersectoral Committee on Human Services) and a large number of faculty and graduate students from the University of Saskatchewan. CUI SR's mission is "to serve as a focal point for community-based research and to integrate the various social research needs and experiential knowledge of the community-based organizations with the technical expertise available at the University. It promotes, undertakes, and critically evaluates applied social research for community-based organizations, and serves as a data clearinghouse for applied and community-based social research. The overall goal of CUI SR is to build the capacity of researchers, community-based organizations and citizenry to enhance community quality of life."

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EXECUTIVE SUMMARY

Background

Increasingly, we are learning much about the importance of a good beginning, early in life, to health, happiness and success later in life. However we are less certain about the possible impact of specific interventions in early childhood, especially when these interventions are community-based and are intended to change multiple outcomes. This research focused on understanding in some detail how a school-based intervention, full-time programming in kindergarten, affected the children and families participating in these programs.

Objectives

The study addressed three objectives.

- Assess learning and developmental outcomes in four domains (socio-emotional, physical, intellectual and spiritual development) in students in full-time kindergarten programs compared to students in part-time programs.
- Assess the current structure of full-time kindergarten programs, including classroom organization, space and resources, its strengths and weaknesses as identified by key stakeholders (teachers and parents).
- Provide feedback to Saskatchewan Learning and to the three participating school divisions to inform future decisions.

Methods

This study involved three school divisions—Onion Lake, Living Sky and Saskatoon Catholic—offering full-time programming in the kindergarten level. With the exception of one non-participating school division, these three school divisions represent virtually all of the full-time kindergarten programming offered in Saskatchewan in the school year, 2005/06. In the provincial context, these three school divisions represented diversity in terms of geographical location and size (a large city-based school division, a mid-size city school division, and a northern school division), publicly and separately run school divisions, and maturity of the programs (in two school divisions full-time programming have been running for multiple years, in one school division the program was in its first year).

The study included 322 students enrolled in full-time and part-time kindergarten programs in three school divisions. Of these, one hundred and seven were enrolled in full-time programs in Saskatoon Catholic, forty-five in Living Sky, and eighty-five students in Onion Lake. Amongst full-time students, the male to female ratio was even for

students participating in Saskatoon Catholic school division, but favoured female student in Living Sky and Onion Lake school divisions. In Saskatoon Catholic and Living Sky school divisions 65% and 62% of students, respectively, were of aboriginal descent. In Onion Lake 100% of the students were of aboriginal ancestry. In contrast to full-time students, among part-time students 35% and 38% of students in Saskatoon Catholic and Living Sky, respectively, were of non-aboriginal ancestry.

The study also included eighteen teachers (thirteen teaching in full-time programs, five in part-time) and sixty-five caregivers (forty-five of these with children in full-time program).

In this study we used both quantitative and qualitative data, collected from various sources (teachers, parents, administration) using various methods (questionnaire based, classroom observations, interviews, focus groups, and routinely collected administrative data). We used standardized tools to assess student outcomes, such as Social Skills Rating System (SSRS), Teacher version for measuring social skills and problem behaviours, Test for Early Reading Ability (TERA-3) for early literacy skills, Early Development Inventory (EDI) for measuring physical health and well-being. These data were collected in May and June of 2006 with the assistance of the teachers. Student attendance data were provided by the school administration at the end of the school year.

To understand the classroom context, we examined the space and materials available in the classrooms, as well as instructional styles of the teachers. We used a standardized tool for this purpose (Early Childhood Classroom Observation Measure, ECCOM). We also collected information on teachers' experience and qualifications as factors that may affect student outcomes.

In-depth and focus group interviews were held with teachers and caregivers (most often parents). Interviews with teachers were held in groups of two or three, and focus groups with parents in groups of five to nine. Interviews and focus group questions were informed by major topics of concern reported in the literature, and guided by our previous study in this topic. Interviews usually lasted forty-five to sixty minutes and were tape recorded and transcribed before analysis.

Findings

Findings from this study are extensive and diverse, from patterns in attendance rates across the months of the school year to classroom organization, space and resources available, to student-centred learning and development outcomes, to perceptions of teachers and parents about strengths and limitations of full-day kindergarten programs in comparison to those of part-time programs. We have summarized the important findings below.

Attendance: School attendance is an important prerequisite for learning at school. Students in part-time kindergarten programs showed consistently higher rates of at-

tendance throughout the school year than their full-time counterparts. The clearest difference in attendance rates was seen in Living Sky school division, where part-time kindergarteners showed attendance rates better than 90% throughout the school year whereas full-time kindergarteners' attendance was in the 80% range, a good 10% lower. The same pattern was observed for kindergarteners in Saskatoon Catholic, although unlike in Living Sky the difference in attendance between the part-time and full-time students was narrower. Students in Onion Lake showed the lowest rates of attendance of all three school divisions, but the differences in attendance rates between Cree-immersion and non-Cree immersion students were not clearly discernible.

Classroom environment: The physical settings of the classrooms in this study were generally good places for children to learn, although there was a wide range in the degree of adequacy. Some classrooms were well-resourced, physically well set-up while others fell below the norm. Classroom environment was measured in relation to organization, availability of space and resources that would aid development in specific areas. Full-time kindergarten classroom fared better than the part-time classrooms in terms of having adequate space and materials that support gross motor development in kindergarten children. Material and amenities available for math development appears to be more common in part-time classrooms than in full-time ones. Both types of classrooms scored below average for availability of materials that supports imaginative and dramatic play. This finding was in spite of teachers reporting that they believed much learning occurs in play-base experiences. There were notable differences in instructional practices and teacher experiences between the full-time and part-time classrooms. Teachers in full-time classrooms exhibited a more traditional, didactic style while part-time teachers tended to have more of a student centered style.

Physical development outcomes: Some evidence indicates that part-time students exhibit better physical health and well-being outcomes than their full-time peers. The type of program was not generally the most important factor in predicting this wellbeing, as compared to student-related variables such as age and being designated with special problems.

As expected, the findings vary significantly from one division to another, indicating that the full-time program does not have universal benefits independent of its context. The classroom context, teacher, parents all appears to play a role, interacting with student related factors (age, sex, special skills, or special problems), to benefit students in full-time kindergarten programs. The factors related to students such as age (whether born earlier or later in the age cohort), special designations, and classroom resources have an impact equal to or greater than that of the impact on student outcomes attributable to the type of program.

Socio-emotional outcomes: Full-time kindergarten students were observed to have more problem behaviours than their part-time kindergarten peers. This is to be expected since at least in one school division the reason for introducing full-time kindergarten

option was to address behavioural issues. Students with special skills or problems and students who are older were also more likely to score high in poor behavioural outcomes.

Intellectual outcomes: The findings here are mixed. In Saskatoon Catholic school division full-time students fared better on a specific aspect of language development (the Alphabet subscale) while in Living Sky School Division, the part-time students scored higher on the same subscale.

Spiritual development outcomes: The general consensus among the teachers and parents of the kindergarten children who participated in this study is that regardless of how spirituality was incorporated and practiced in the curriculum or as part of extra-curriculum, the key message delivered in the classrooms was to learn and show mutual respect to each other and to adults, and to develop a sense of one's cultural and personal identity in children. In other words, becoming a "good person" in addition to being a 'good student' was the intention of spiritual dimension in the kindergarten programs.

Many parents were unequivocal about the benefits of the full-time kindergarten program, especially helping students with the transition to school, acquiring skills relating to positive social behaviour in the classroom, and in providing a predictable, convenient schedule for both children and parents. One theme that emerged, regardless of which program that the parents had chosen or supported, was that parents' wish to retain choice in enrolling their children in kindergarten programs.

As this study has shown, there are many realized and potential benefits to students and families in having children attend full-day, every-day kindergarten programs. As with the introduction of any new programs, there is excitement and expectations of what benefits a new program might deliver, as well as apprehension and even rejection of the program among others. The time is upon us to offer and institutionalize full-time kindergarten programming in all schools, not simply because it has either proven its benefits or it has unrealized potential to benefit students, but because it is a clear manifestation of society collectively taking a greater responsibility to help our young children have the best start in school. It is how we give credence to the often heard adage: *it takes a village to raise a child!*

CHAPTER 1:

BACKGROUND TO THE EVALUATION

Full-time kindergarten (FTK) is defined as having a full day of school every weekday.¹ Part-time kindergarten (PTK) programs, on the other hand, vary in their structure including the frequency of offering. Some schools offer classes every day for half a day (i.e. morning or afternoon), while others are full-day, every second weekday. This report presents the results of a comprehensive evaluation of the implementation and short-term outcomes of FTK programs in comparison to PTK programs in three school divisions in Saskatchewan: Living Sky School Division (previously Battlefords School Division), Onion Lake, and Greater Saskatoon Catholic Schools. The evaluation focused on students' outcomes in four broad areas as directed by provincial policy document, *Children First: A Curriculum Guide for Kindergarten* (April 1994), and the subsequently released Common Essential Learning, Personal and Social Development (see *Spiritual Development: An Overview*, 2004). The evaluation examined the nature of the programs themselves and took into consideration any changes that occurred in families, attributed by parents to having students participating in FTK programs. Data collection involved kindergarten students, teachers, and parents or caregivers.

This report adds to an evolving body of evidence and the discussions on the benefits and cautions of FTK. In this way, the report contributes to advancement of knowledge on FTK implementation and its impact on key stakeholders: children themselves, their families, teachers, and school systems. The findings of this evaluation are intended for use by Saskatchewan Learning and the participating school divisions to inform future policy decisions. More broadly, we hope the results will inform and guide FTK programs in other school divisions in Saskatchewan and beyond.

The evaluation addresses two main questions: (1) To what extent are the objectives for student outcomes at the kindergarten level achieved through FTK programming compared to PTK programs?; and (2) What, if any, benefits exist for learners and their families in FTK compared to PTK?

This is the second of a two-part report on the evaluation of FTK programs in Saskatchewan. In Part 1, we presented an evaluation framework for FTK programs (*An Evaluation Framework for Saskatchewan Kindergarten Programs, Phase One*. See Muhajarine et al, 2007). In this report we present the results of the evaluation of three FTK programs. Organizationally, this report follows closely the main student outcome domains articulated by the provincial kindergarten curriculum guide: physical development, socio-emotional development, intellectual development and spiritual development.

¹ These types of programs, essentially offering more time in the classroom for kindergarten children, go by different names. For ease of reference, in this document we will refer to these programs as “full-time kindergarten” or FTK for short. In contrast, the standard offering will be referred to as “part-time kindergarten,” or PTK.

The first chapter explicitly explores some philosophical premises inherent in the literature and discussion around early childhood education. It offers a brief overview of the FTK and PTK programs in Saskatchewan and the curriculum they follow. Lastly, it presents a review of the literature in relation to FTK programs.

Chapter 2 provides an overview of the evaluation process including the study sample, data collection instruments and data collection methods.

The results of the evaluation follow beginning with a description of FTK and PTK classrooms, teacher experience and qualifications, and student attendance (Chapter 3) followed by the socio-emotional, physical, intellectual and, where relevant, spiritual outcomes for students in FTK programs compared to PTK programs (Chapter 4). Chapter 5 presents parental feedback on both programs as well as a discussion regarding the advantages and disadvantages of FTK.

The report concludes (Chapter 6) with a summary of the findings of the evaluation of full-time kindergarten programs. Recommendations for key stakeholders including Saskatchewan Learning and the three school divisions are put forward for consideration.

PHILOSOPHICAL PREMISES

It is important to begin this report with an examination of beliefs and assumptions that may be inherent, implicit, and/or unconsciously held in early childhood education. By explicitly exploring commonly used language in the field, we are able to look more closely at the conceptions this language represents and at how these conceptions are played out in the delivery of both FTK and PTK programs. Examining these conceptualizations is important to a reading of current literature in the field and a reading of the results of this FTK evaluation.

School readiness

While “school readiness” is a term that permeates the early childhood literature, it is difficult to identify a commonly accepted definition. Some definitions focus on the child’s readiness to read and write while others highlight children’s social skills and/or maturation. Some talk of readiness and readiness indicators, encompassing all domains and using the term as a more holistic reference to a child’s “preparedness” to enter into the country’s educational institutions. What many refer to as school readiness is often only an assessment of a child’s skill set in a certain area, at the arbitrary age of five.

“At its core, readiness is multifaceted, complex and systemic, combining:

- A child’s experience at home and the resources of the home;

- The resources and experiences present in childcare and preschool settings attended by the child;
- The community resources that support high-quality parenting and child-care;
- The extent to which the school is well linked to these family and child care resources; and
- The degree to which the classroom experiences provided for the child in kindergarten ... effectively build on competencies he/she brings to school” (Pianta, 2002: 4).

In this report, “school readiness” is used to delineate the broader, more currently accepted view of school readiness as a two-dimensional concept encompassing children who are ready for school and schools that are ready to receive all children (Andrews & Slate, 2001; Emig, 2000; Denton, 2001; Pianta, 2002). The National Education Goals Panel outlined several important characteristics of a ready school, which are often referenced in the literature. Saluja, Scott-Little, and Clifford (2000) summarize them as follows:

Ready schools should have strong leadership, strive for continuity between early care and education programs, promote smooth transitions between home and school, be committed to the success of every child as well as every teacher and adult who interacts with children at school, use approaches that have been shown to raise children’s achievement and then alter practices and programs if they do not benefit children. (Defining and Assessing Children’s Status at School Entrance, 7)

As the National Association for the Education of Young Children affirms in their 1995 position statement:

The nature of children’s development and learning dictates two important school responsibilities. Schools must be able to respond to a diverse range of abilities within any group of children, and the curriculum in the early grades must provide meaningful contexts for children’s learning rather than focusing primarily on isolated skills acquisition (2).

When we attend to the complexity of factors influencing a child’s school readiness, we move from seeing children as either capable or deficit to seeing the dynamic interplay between home, community, and school and between pre-school and school experiences as all being significant to children’s success in the formal school system.

Parent readiness

This is a term not often found in the educational literature, but one we feel warrants consideration, as it was a term used by participants in this study. Just as we look at school readiness as a two-dimensional construct, it is important to frame “parent readiness” in this same two-dimensional way. We must attend to how ready the parent is to define and play a role in relation to the child’s schooling and how ready the school is to identify, nurture, respect, and value the parent’s role within the school environment. As this understanding that parents have an essential role to play in their children’s education in school as well as at home is relatively new ground in many communities, it is important to consider parent readiness by looking both at parents’ engagement in their children’s schooling and at the initiatives schools are taking to overcome barriers that have typically stopped parents at the school doors.

At-risk

“At-risk” is another term commonly used in early childhood literature and, as with readiness, its definition and purpose are a topic of debate among academics and educators. Moore (2006) summarizes the lack of consensus as follows:

Some would argue that all children are at risk in some way or another, while others emphasize that some children face much higher risks than do other children. ... Alternatively, some contend that one should not view children themselves as being at risk, but rather the environments in which children develop. A third approach would focus on the community, neighborhood, or school context as an at-risk environment (1).

While most concede that designating students “at-risk” can serve some purpose in identifying specific needs, there is a strong voice of warning to use the term sensitively and in context, to avoid overgeneralization, stigmatization, and prejudice. “Several observers caution that language identifying children as “at-risk” can serve as a euphemism for racism, class-based biases, sexism or regional inequalities” (Wotherspoon & Schissel, 2000: 8).

Rivers (2005) highlights two critical considerations when employing the term “at-risk.”

[I]t is important to recognize that students at risk do not form a homogeneous group. Also, using the term at risk can lead to the impression that the cause of the risk always lies with the student, when, in fact, the cause may be more to do with the student’s environment (3).

In their policy statement, The National At-Risk Education Network (NAREN) writes that the term at-risk, in the educational setting, refers to “at-risk of dropping out of school; and/or, at-risk of not succeeding in life due to being raised in unfavorable circumstances” (1). They go on to outline how their definition stresses the “‘mismatch’ between children’s needs and what the school has to offer” (1). They suggest that making the school a part of the definition of the term “at-risk” will encourage and empower the institution to take ownership of the problem.

Hixson (1993) agrees and suggests that there is a need to change the perspective from which we view the at-risk problem. He puts forth three principles to guide our efforts.

- Students are not “at risk,” but are placed at risk by adults.
- Building on student strengths (e.g. knowledge, experiences, skills, talents, interests), rather than focusing on remediating real or presumed deficiencies is the key.
- It is the quality of the entirety of the school experience, rather than the characteristics of the students, that will determine success or failure—both theirs and ours. The two can never be separated (5).

Hixson’s delineation emphasizes again the role of the school and the concept of “mismatch.” “Students are placed “at risk” when they experience a significant mismatch between their circumstances and needs, and the capacity or willingness of the school to accept, accommodate, and respond to them in a manner that supports and enables their maximum social, emotional, and intellectual growth and development.”

“As academics and educators, if we are not cognizant that ‘at-risk’ discussions restrict the way in which we are able to speak to the issues of child and youth welfare, we run the risk of engaging in ideological discussions that have, at best, short term therapeutic benefits and potential long-term disadvantages” (Wotherspoon & Schissel, 2000: 5). Given the risk inherent in the use of this term, we are assuming a broader conceptualization of “at-risk” which acknowledges the strengths and talents every child possesses and which attends to the home, school, and community environments which support or deter the child’s realization of these strengths and talents in his/her schooling experiences.

Self-esteem

Self esteem is a term that was used by both parent and teacher participants in this study to talk about the benefits of FTK programming. It is a nebulous term that many “seem to know” but few can define precisely. It is associated with, but not synonymous with, several other terms such as self-concept, self-satisfaction, self-acceptance, and self-ef-

ficacy (Guindon, 2002). In this study, we believe participants are referring to several different aspects of their children's observable behaviour when they use the term "self esteem." Some examples of these behaviours include:

- willingness to participate/socialize;
- ability to take initiative and make decisions;
- contentment and satisfaction;
- sense of belonging; and
- confidence in his/her abilities.

Within all the conceptualizations delineated above, we see the kindergarten child as nested in the context of family, community, and school. When we examine the child's kindergarten experience, whether it be part-time or full-time, we recognize that it is important to do so in light of the dynamic and complex interplay within this systemic context, attending to both the child's lived history prior to the start of his/her formal schooling as well as his/her experience in the kindergarten classroom. When we attend to context, we attend to what is and we move away from placing blame on children, parents, families, or communities for what are perceived deficits, to designing and implementing sound educational programs that are strength-based and receptive and responsive to the children enrolled, their families, and the communities in which they live. It is from these philosophical premises that we share an overview of key understandings in the current literature on FTK programs and our evaluation of FTK programs in three Saskatchewan school divisions.

KINDERGARTEN PROGRAMS IN SASKATCHEWAN

Saskatchewan Learning has identified the overall aim of kindergarten programs in Saskatchewan as providing a "strong foundation from which students can grow to become active participants in life-long learning" (*Children First: A Curriculum Guide for Kindergarten*, 7). Through socio-emotional, physical, and intellectual development, the program seeks to have children:

- develop confidence in themselves and their ability to learn;
- demonstrate curiosity and the ability to focus their attention;
- acquire a level of communicative competence that [to the child] is personally satisfying;
- acquire social skills and abilities which enable them to relate to other children and to adults; and
- remain true to their individual natures; being free to develop their potential.

While these expectations are the same for both FTK and PTK programs, it is hoped that the implementation of FTK programs will ensure that a greater number of students achieve these goals. With increased student achievement in mind, McKittrick Elementary School and Connaught Elementary School in the Living Sky School Division implemented FTK programs during the 2004-05 school year. These programs were implemented in response to an observed lack of readiness² of many students for Grade 1 as well as a renewed focus on early years, particularly the development of oral language skills.

An initial evaluation of the FTK programs in the Living Sky School Division revealed that improvements in cognitive, language, and communication skills were evident among children (Evitts, Muhajarine, and Pushor, 2005). The impacts on behavioural and socio-emotional outcomes were less conclusive. Feedback from parents, caregivers and teachers indicated that the FTK programs were viewed as contributing to greater success in children and families.

Since the initiation of the FTK programs in the Living Sky School Division in 2004-05, similar FTK programs have been implemented by school divisions across the province including the Saskatoon Public School Division, Greater Saskatoon Catholic Schools and Onion Lake schools. It should be noted, however, that the study participants make up the majority of those students in the province attending FTK programs.

This report includes data collected from students, teachers, and parents from three sites: Onion Lake, Living Sky School Division, and Greater Saskatoon Catholic Schools. Pawasenakwan School in Onion Lake, which offers both Cree Immersion and non-Cree Immersion FTK programs, was the sole participant. In the Living Sky School Division, Connaught, McKittrick Community, and Lawrence Schools participated in the study. In Greater Saskatoon Catholic Schools, St. Mark, St. Michael, Bishop Klein, St. Goretti, and St. Vlodymyr Schools participated. Connaught, McKittrick, St. Goretti, and Bishop Klein schools are designated as Community Schools.

LITERATURE REVIEW

The following literature review is organized to reflect evaluation outcomes, as outlined in the accompanying Program Logic Model. These themes are also reflected in the results section. The literature review outlines, in order, literature on the nature of the classroom in early childhood education, physical development, socio-emotional development, intellectual development, student and teacher perceptions of kindergarten programs, and, finally, the longitudinal effects of full-time kindergarten programs.

² Please see our delineation of the term “school readiness” on page 2.

The classroom

Studies examining the impact of different instructional approaches on children's motivation and achievement have had mixed results regarding the impact of didactic programs.³ On the one hand children in didactic programs score higher on letters/reading achievement tests, but on the other hand also rate their abilities significantly lower, have lower expectations for success on academic tasks, show more dependency on adults for permission and approval, evidence less pride in their accomplishments, and claim to worry more about school (Stipek, Rachelle, and Daniels, 1995: 209). This illustrates Meyer's (1985) argument that what happens in the classroom is often more important than the amount of time spent in the classroom. In support of this, Karweit (1992) stated that while time spent may have some modest influence on student outcomes, what is more likely to have a direct and significant effect is the extent to which schools provide "developmentally and individually appropriate learning environments" (p.84). Many researchers (Miller, 2002; Karweit, 1992; Porch, 2002) have stated that high-quality FTK programs should look the same as high-quality PTK programs and the expectations of each should be the same (Graue, 2000; Vecchioti, 2001). Further to this, Clark and Kirk (2000) argued that, all things being the same in terms of developmentally appropriate curriculum, FTK offers many benefits to children over PTK. It is from this perspective that Rothenburg (1995) suggested researchers control for the nature of the curriculum and the quality of the teaching when examining benefits of one kindergarten program over another.

Physical development

There is little in the full-time kindergarten literature that looks specifically at physical development outcomes. A likely reason for this is because physical development is largely determined by biological and environmental factors (for example, adequate nutrition, high quality food) that extend far beyond the influence of the kindergarten classroom in geographical space and in child development time. Information gathered by researchers on children's physical abilities serves to help us better understand student outcomes in other areas, such as cognitive or language achievement. Offord Centre's Early Development Instrument, for instance, is frequently used to gather information on gross and fine motor skills, students' energy levels, independence (where applicable) and daily living skills.⁴ These factors, along with student age and sex, play a large role in determining student outcomes in social, emotional, or language and cognitive achievement and are

³ A didactic program is described by Stipek (1992) as a "teacher controlled and directed classroom that emphasizes the acquisition of basic academic skills. The instructional program involves primarily drill and practice through oral recitation and worksheets. Social skills are not emphasized; instead of assisting students in developing social skills, the teacher minimizes peer interaction and imposes solutions when conflicts arise. Rather than child-centered, the program is based on the teachers' predetermined (sometimes packaged) agenda" (1).

⁴ See http://www.offordcentre.com/readiness/files/EDI_Factsheet.pdf.

therefore important to include in any study of such outcomes. In short, studying physical development in kindergarten is most appropriately focused on students' general well-being and ability to function in a classroom setting.

Socio-emotional development

Many teachers, parents and researchers concur with Finn (2002), who described the full-day program (or full-time program) as "learning how to learn." Learning how to learn requires that children learn how to conduct themselves and interact in a classroom setting. In this regard, many researchers have found an overall improvement in students' behaviour which they believe is attributable to FTK programs (Elicker & Mather, 1997; Clark & Kirk, 2000). Cryan, Sheehan, Wiechal, and Bandy-Hedden (1991) and Evansville School Corporation (1988) concurred that FTK contributes to increased school readiness among kindergarten students.

When comparing FTK to PTK programs, Elicker and Mathur (1997) found that children in full-time programs scored higher on many dimensions of behavioural assessments than did their PTK cohort, and scored no differently on the rest of the dimensions. In a study conducted a few years later, Wang and Johnstone (1999) found less equivocal results, and concluded that "being in a full-day program tended to improve students' behaviours more than being in a half-day program" (31).

Holmes and McConnell (1992), Cryan (1992) and Karweit (1992) also found that FTK students demonstrated more independence, class involvement, productivity, and reflectiveness than their PTK counterparts. In addition, the Ohio State Department of Education (1992) found FTK students achieved higher positive scores on behaviour assessments than PTK children. Of interest, however, are fairly recent findings from Hildebrand (2001), who found that parental practices had a greater impact than the kindergarten schedule on student behaviour and achievement.

Intellectual development

There is a general consensus in the literature that FTK programs lead to improved gains in several specific areas of learning. Wang and Johnstone (1999) found that students in FTK showed more gains in several areas (oral language, emergent reading skills, and early math reasoning) than those who were not enrolled in such programs. In addition, Walston and West (2005) stated that "findings from a multilevel regression analysis indicate that children in full-day classes make greater gains in both reading and mathematics compared to those in half-day classes *after* adjusting for gain score differences associated with race/ethnicity, poverty status, fall achievement level, sex, class size, amount of time for subject area instruction, and the presence of an instructional aide."

Student achievement

Students enrolled in FTK tend to show greater academic achievement than PTK students (Cryan, Sheehan, Wiechal, and Bandy-Hedden; 1992; Rothenberg, 1995; Hough & Bryde, 1996; Elicker & Mather, 1997; Fusaro, 1997; Elicker, 2000; Gullo, 2000). Plucker et al (2004) outlined a large urban study in which the goal of FTK was to lessen the achievement gap between students from different socioeconomic backgrounds. The implementation of FTK appeared to have done so with “no negative results commonly associated with FTK,” while “significant results in support of the benefits of FTK over PTK were found” (24). The benefits of FTK seem to last beyond the kindergarten year. Larson (2003) reported that FTK students in their second grade scored significantly higher on the Canadian Tests of Basic Skills (CTBS) than did their PTK counterparts, particularly among students from low socioeconomic communities.

Not all studies found that early achievement is clearly better among FTK students than PTK students (cf. Alber-Kelsay, 1998). Some of these studies, however, suffer from a general lack of methodological rigor, especially lack of adequate control for intervening or interactive variables. Others authors, such as Karweit (1992), have stated that the few carefully designed studies done in the 1990s, which used matched cohorts, show “modest and sometimes inconsistent short-term effects for full-day programs” (83). Villegas (2005), in a review of studies done since 1995, noted that academic achievement appears to be the primary benefit accruing from attendance in FTK programs. Nielson and Cooper-Martin (2002) found that FTK students as a whole benefited whether they were from at-risk or non-at-risk groups. According to a 2003 study by McAuliffe (reported by Carter, Cresswell, and deAlba, 2004), FTK benefited all students in grade one, though there were significant differences between boys’ and girls’ outcomes in both kindergarten and in grade one.

Literacy/Language

Considered one facet of “achievement,” literacy is for many researchers the focus of attention. This is because much research finds the development of literacy skills is related to the acquisition of more advanced skills in later years. Hoffman and Daniels (1986) found that children who attended full-day programs experienced some advantages in reading skills and experiences over those who attended half-day programs (1). Sergeketter and Gilman (1988), however, found no significant differences in children’s reading skills after attending full-day or half-day programs. Studies conducted in recent years have more consistently reported that FTK increases literacy skills compared to attending three-quarter-time or half-day kindergarten (Zakaluk & Straw, 2002; daCosta & Bell, 2000 & 2001; da Costa, 2005; Hildebrand, 2001; Tafa, 2004). Others such as Denton, Walton and West (2003), Elicker and Mather (1997), Hough and Bryde, 1996, and Wolfersteig (2005) confirmed these findings. Dda Costa and Bell (2001) found that

low SES “students in full-day program experienced significantly greater growth in the prerequisite skills for reading than children in the half-day program, after taking into account students’ ability, age and gender [*sic*]” (1).⁵

Wang and Johnstone (1999) found that students in FTK showed more gains in several areas (oral language, emergent reading skills, early math reasoning, behaviours) than those not enrolled in such a program. Others reviewing research to date, such as Fifield (2004), found that “full day students made more progress than their half-day peers” (32) in their use of vocabulary. In another review of research, Plucker (2004) discussed findings where FTK “students with exposure to learning activities ... measured higher gains” in letter identification and concepts about print” (16).

Who benefits from FTK?

In terms of who benefits most from FTK programs, the consensus appears to be that greater benefit is accrued to children and families from marginalized communities. Generally, children from families in low socio-economic status, single-parent headed families, ethno-cultural minority families or those with a language other than English as their first language seem to benefit most from FTK programming (Clark, 2000; Cryan et al, 1992; Elicker & Mathur, 1997; Hough & Bryde, 1996; Koopmans, 1991; Puleo, 1988; Housden & Kam, 1992; Karweit, 1992; Rothenburg, 1995; Ross & Roberts, 1999; da Costa & Bell, 2000 and 2001; Da Costa 2005; Bridges-Cline, Hoffer-Riddick, and Gross, 2002). It is clear that children from families who are marginalized for one reason or another are more likely to be labeled as living in an “at-risk” environment⁶ and potentially having a greater need for FTK programming.

Parent and teacher perceptions

When researching the effects of implementation and the effectiveness of kindergarten programs, it is important to ask parents and teachers what their experiences are with these programs (Good, 1996). Parents’ perspectives are important because they have first hand knowledge of their children and of the home environment, whereas teachers offer valuable professional insights with respect to their students’ progress in the program.

Students are regarded by teachers and parents as benefiting from the extended time

⁵ This is the use of the term in the original document. Technically speaking, gender refers to individually chosen roles or behaviours that are masculine or feminine. Gender is acquired and is not innate. Sex refers to the biological state of being male or female. Thus, this report will be using the scientifically appropriate term sex to denote students or participants as male or female.

⁶ While “at risk” is a commonly used term, the term “serves to decontextualize the problems associated with students who experience oppression and marginalization” (Salm, 2004) and “preempts discussion about unfair social structures, about exploitative adults, and about irrelevant or unworkable institutions” (Wotherspoon and Schissel, 2001).

“Half-day kindergarten parents are as passionate and committed to their choice of kindergarten as are parents with children in full day. It is a sign of a healthy community when people can choose what works for their family, and also support the rights of others to be committed to another choice.”

invested in flexible and informal learning (Fromberg, 1995; Vecchiotti, 2001). Students also benefit from the extended learning-day because the teacher is more able to work with individual students or small groups (Vecchiotti, 2001; Miller, 2002, Porch, 2002). Teachers seem to benefit from the increased teaching time and decreased transition time that FTK provides, and the increased time to assess student progress (Nelson, 2000; Vecchiotti, 2001; Elicker & Mather, 1997). Elicker and Mather (1997) further found that FTK helped students make the transition to grade one, provided more flexibility and time to learn, was less stressful and frustrating because of the increased time to fully engage in activities, and helped teachers get to know students and their families better. Feedback from FTK children’s parents is generally favorable (Towers, 1991), though Cooper, Foster and Cobb (1998) found in their survey that both PTK and FTK parents were happy with their children’s kindergarten programs and were equally committed to their chosen kindergarten program format. Cooper et al (1998) uncovered some concerns that kindergarten is being used as daycare, whether it is a part- time or full-time format.⁷ Parents are quick to assert that they should have a choice of kindergarten program offerings. Cooper et al write: “Half-day kindergarten parents are as passionate and committed to their choice of kindergarten as are parents with children in full day. It is a sign of a healthy community when people can choose what works for their family, and also support the rights of others to be committed to another choice” (1998: 11).

Longitudinal effects of FTK

Long-term benefits

“The difference between those who attended full-day and half-day kindergarten is apparent at the end of third grade only for children whose family primarily speaks a language other than English at home.”

There are concerns that even when academic benefits of FTK are observed in kindergarten that these benefits lessen over time. Elicker (2000) stated that there is no evidence that the benefits experienced in FTK extend past grade one and into subsequent grades. Koopmans (1991) found, in fact, that the higher scores of FTK cohorts diminish over time compared to PTK cohorts, but it is difficult to pinpoint where the effects become null, or not different, between the FTK and PTK students. Van Fleet (2002) (in Plucker et al, 2004) showed a more complex picture. He stated that “[a]fter an initial jump in scores between the kindergarten and first grade years, as the FTK students advanced farther in school, their total scores on the tests declined ...” though “for the most part, from year to year, most grades mean scores have increased” (18). While some FTK students may not exhibit benefits in later years, some certainly do. Walston, West, and Rathbun (2005), in speaking of the academic gains that some FTK students had over their counterparts, said the “difference between those who attended full-day

⁷ Because the authors find these concerns problematic, they will be discussed in detail below.

and half-day kindergarten is apparent at the end of third grade only for children whose family primarily speaks a language other than English at home” (16).

How long do the benefits last?

The Ohio State Department of Education (1992) found that the benefits for FTK children over that of PTK children extend into second grade (29). Studies such as da Costa’s (2005) discuss similar findings, where benefits of full-time kindergarten can, in fact, be seen as extending into the first and second grades of elementary school. Fairfax County Public Schools (2006) also concur that one benefit of FTK is higher achievement (regarding literacy), finding that these benefits last into grade two, and are especially strong for students living in marginalized circumstances. Larson (2003) found similar results in that improvements in reading for students up to grade two were “significantly greater in the schools characterized by high poverty when compared with school in wealthier neighborhoods” (i) and Alban, Nielsen, and Schatz (2003) state that while the benefits for all students could not be seen into grade two, the benefit for “English speakers of other languages” (ESOL) and free/reduced meal students could still be seen.

Often these benefits are seen to be visible past grade two as in Gullo (2000), Finn (n.d.), and Stofflet (1998). Perhaps not surprisingly, given the complexity of variables surrounding students’ learning success, Stoflett (1998) found no strong evidence of a relationship between kindergarten program and achievement in grade four and higher, though FTK students were less likely to be retained and less likely to be put in a modified grade one program than their PTK counterparts. Cannon, Jacknowitz and Painter (2006) also found that “there are initial benefits for students...who attend full-day kindergarten, but that these differences largely evaporate by third grade.” In addition, FTK benefits are not universal, as found by Fairfax County Public Schools (2006): “[C]ontrary to expectation, at both Grade 1 and Grade 2, former [half day kindergarten] students performed better than former FTK students on a nationally standardized test of mathematics achievement, although the differences fell short of statistical significance” (1).

“Improvements in reading for students up to grade two were significantly greater in the schools characterized by high poverty when compared with school in wealthier neighborhoods.”

To conclude, Evitts, Muhajarine and Pushor (2005) stated, “It must be made clear ... that extending the kindergarten day by three hours can hardly be expected to be a panacea for developmental delays or the personal, family, community difficulties that many children will inevitably encounter. Slightly modifying Finn’s (no date) all important question, we ask ‘What can we reasonably be expected to achieve through [full time] kindergarten participation?’” (1). A reasonable answer can be found in da Costa’s report (2005: 30), which states:

Given the results in kindergarten, grade one, grade two, and grade three obtained by low SES students who attended full-day kindergarten programs, it is without a doubt that the program (along with other

programs made available to students in grades 1 to 3) has positively affected their abilities to read and write in these grades. This comes in the face of a multitude of family and social issues (e.g., poverty, drug and alcohol abuse, physical abuse, high transience levels) all working to mitigate students' chances of success. Full day kindergarten needs to continue to be offered to low SES students.

This chapter presented some of the philosophical premises inherent in the literature and discussion around early childhood education. It also provided a brief overview of kindergarten programs in Saskatchewan as well as a review of the literature in relation to FTK. The evaluation process employed in this study is presented in the next chapter.

CHAPTER 2:

METHODOLOGY

This chapter presents the methods used to evaluate full-time kindergarten programs in Saskatchewan, including the objectives of the evaluation and a description of the sample and data collection instruments and methods.

INTRODUCTION

Elicker and Mathur (1997) argued that a “process-oriented, multi-method, multi-perspective approach...can produce richer, potentially more useful results than can be gained by traditional experimental designs alone” (477). A multi-method, multi-perspective approach has been used for this study. We believe that such an approach can most adequately address highly complex issues such as evaluating the success of an education program. The outcomes expected from an educational program require not only assessments of students’ specific abilities using reliable tools, but input from those who have seen the children throughout the year and have influenced their learning and growth. These individuals include teachers and parents of the kindergarten children. A multi-method, multi-perspective approach will more likely achieve a more holistic and accurate understanding of the impact of such a program.

OBJECTIVES OF THE EVALUATION

The objectives of the evaluation of full-time kindergarten programs in Saskatchewan were as follows:

1. To assess learning and developmental outcomes of students in full-time kindergarten programs (socio-emotional, physical, intellectual, and spiritual development) compared to students in part-time programs;
2. To assess the current structure of full-time kindergarten programs, including classroom organization, space and resources, and its strengths and weaknesses as identified by key stakeholders (teachers and parents);
3. To provide feedback to Saskatchewan Learning and the three participating school divisions to inform future decisions.

THE SAMPLE

The 2005-06 school year saw 322 students from FTK and PTK programs in Onion Lake, Living Sky, and Saskatoon Catholic kindergarten programs involved in this study. Rep-

representatives from school divisions with PTK in place were asked to choose matching PTK classrooms as comparisons to the FTK classes, considering the following parameters: male/female distribution, age of children, sex of teacher, experience of teacher, socioeconomic status of the community in which school is located, and class size. It was neither possible nor ethical to randomly assign children to classes to maximize class similarity. A breakdown of students by division, sex, and Aboriginal (self-identified) status is provided in **Table 1**. Saskatoon Catholic, with six FTK classes, chose five PTK classes as the comparators. Living Sky, with two FTK classes, chose one school with two PTK classes as their comparison group. Given that Onion Lake has no PTK classes we chose to compare the Cree Immersion students with the English Immersion students for this division only.

Table 1. Students Included in the Study by School Division, FTK/PTK Status, Sex, and Self-Identified Aboriginal Status.¹

	Saskatoon Catholic				Battlefords				Onion Lake			
	FTK		PTK		FTK		PTK		Cree Imm.		Non-Cree (English) Imm.	
	N	%	N	%	N	%	N	%	N	%	N	%
# Students	107	N/A	97	N/A	45	N/A	28	N/A	18	N/A	97	N/A
Boys	53	49.5	25	25.6	13	40.0	19	67.9	0	0.0	31	32.0
Girls	54	50.5	71	74.4	27	60.0	9	32.1	18	100.0	66	68.0
% Aboriginal	N/A	64.5	N/A	35.1	N/A	6.7	N/A	35.7	16.7	100.0	97	100

Table 2 shows the number (and percentages) of students in FTK and PTK programs who participated in the study according to their school division. It presents a summary profile of the students in terms of sex, age, ethnicity, and special needs status, and compares FTK and PTK students in relation to these characteristics. As shown, there was a significant difference between the proportions of girls and boys in FTK and PTK classrooms in Living Sky—there were more boys in the PTK program than in the FTK program. There were some differences in the proportion of Aboriginal children in FTK and PTK classes in Catholic Schools as well—more students with an Aboriginal ancestry were enrolled in FTK than in PTK programs.

¹ St Volodymyr School in Saskatoon Catholic had an Aboriginal population of approximately eight percent. This low percentage for St. Volodymyr is in comparison to other schools in the same Division in this study which had significantly higher percentages (from 36-80%) of Aboriginal students in their kindergarten programs.

Table 2. Student Characteristics Between FTK and PTK Programs by School Division (N=322).

School Division	Independent Variables		Cree Imm. (n=18)		Non-Cree (Eng) Imm. (n=67)		Sig.
			Number	(%)	Number	(%)	
Onion Lake	Sex	Female	13	72.2	36	53.7	0.162
		Male	5	27.8	31	46.3	
	Age	Younger	10	44.4	22	32.8	0.939
		Older	8	55.6	45	67.2	
	Ethnicity	Non-Aboriginal	0	0.0	0	0.0	---
		Aboriginal	18	100.0	60	100.0	
	Special Needs	No special needs	10	100.0	59	88.2	0.587
		Special needs	0	0.0	1	1.7	
			Full-Time (n=45) Number (%)		Part-Time (n=28) Number (%)		Sig.
Living Sky	Sex	Female	27	60.0	9	32.1	
		Male	18	40.0	19	67.9	
	Age	Younger	16	57.1	12	42.9	0.409
		Older	29	64.4	16	34.6	
	Ethnicity	Non-Aboriginal	10	23.8	12	46.2	0.057
		Aboriginal	32	76.2	14	53.8	
	Special Needs	No special needs	40	95.2	25	86.2	0.061
		Special needs	2	4.8	1	3.8	
			Full-Time (n=107) Number (%)		Part-Time (n=57) Number (%)		Sig.
Saskatoon Catholic	Sex	Female	54	50.5	31	54.4	
		Male	53	49.5	26	45.6	
	Age	Younger	49	65.3	26	34.7	0.810
		Older	58	65.2	31	34.8	
	Ethnicity	Non-Aboriginal	51	49.0	37	64.9	0.053
		Aboriginal	53	51.0	20	35.1	
	Special Needs	No special needs	95	81.3	50	87.7	0.465
		Special needs	9	8.7	7	12.3	

Notes: Significance results obtained through one-way ANOVA.

We did not sample children or teachers within the FTK and PTK classes because the population was small enough to allow all children and teachers to participate. We interviewed eighteen teachers, and had twenty PTK and forty-five FTK caregivers participate in our focus groups and interviews. Focus group and interview participants, who were all caregivers of children in the FTK and PTK classes, were chosen purposively in an effort to achieve a wide representation of caregivers, taking into consideration their school involvement, socioeconomic status, sex, family make-up, employment, age, and whether they have other children. Teachers and school staff assisted in choosing the caregiver participants, and thirty percent of caregivers in each class were invited to participate. Individuals or couples deemed to have extensive experience with the kindergarten programs were chosen for in-depth interviews, and others were included in focus groups. Selected participants were sent a letter inviting them to participate, and these were followed up by phone calls. Each focus group (one focus group for every two schools) ranged from five to nine participants. **Table 3** shows the breakdown of the staff and caregiver sample.

Table 3. Teaching Staff and Caregivers Included in the Study by School Division and FTK/PTK Status.

	Saskatoon Catholic		Living Sky		Onion Lake	
	FTK	PTK	FTK	PTK	FTK	PTK
# Teachers	7	4	2	1	4	N/A
# Caregivers	20	12	11	8	14	N/A
Total	27	16	13	9	18	N/A

DATA COLLECTION INSTRUMENTS

The FTK programs were implemented with a particular focus to improve students' behaviour, literacy, and other achievements. In addition, sustaining physical health of children and some awareness of and exposure to spiritual development were also deemed important. Therefore, we included tools that measured three types of student outcomes (behaviour, literacy, and other academic achievements), which is consistent with the outcomes identified in the Program Logic Model (see Muhajarine et al, 2006). In order to address the frequent criticism in the literature that not enough research evaluating the effectiveness of full-time kindergarten programs adequately accounts for instructional practices or the classroom environment, we sought to comprehensively measure classroom practices and environment in this study. We used our knowledge from previous research (Evitts et al, 2005) to inform our methods in this next phase of the evaluation project.

Social Skills Rating System (SSRS)²

The Social Skills Rating System (SSRS) measures children's behaviour and interpersonal skills. It is appropriate for children ages three to eighteen years. It may be used to measure behaviour skills as reported by sources that are closest to children, such as teachers and parents. It has good construct, concurrent, and content validity, with good internal consistency and inter-rater reliability.

Test of Early Reading Ability, Third Edition (TERA-3)

The Test of Early Reading Ability, Third Edition (TERA-3) measures early reading ability and early literacy skills in children, including formative knowledge of printed symbols, the alphabet, and conventions of print. It is appropriate for children ages 3.6 to 8.5 years and has been previously shown that it is both a reliable and valid instrument.

Early Development Inventory (EDI)

The Early Development Inventory (EDI) measures how well children come to school prepared to learn, and is assessed in five domains. While EDI is applied at the commencement of children's schooling, at kindergarten level, to understand the various capacities and characteristics of children that may help or hinder children's ability to learn in a classroom, the intent of the instrument is not to label a child as deficit (i.e. "not ready to learn") in one domain or another. In fact, EDI developers strongly advise against the use of the instrument as a screening or diagnostic tool on individual children. EDI measures groups of children and is used to understand to what extent children's pre-kindergarten environments (such as family, neighbourhoods, play groups, child care) have served them to prepare them for formal learning in the classroom.

The EDI is a well established tool and was already in use both Saskatoon Catholic and Living Sky School Divisions at the time of this evaluation. Although EDI may be used to assess children's performance in multiple developmental domains, for this report we focused on the physical health and wellbeing domain of the EDI. In addition, several student related independent variables were sourced from EDI. These are sex (female, male), Aboriginal status (Aboriginal, non-Aboriginal), age (younger - born on or before 1 July 2000; older - born after 1 July 2000), requiring special needs (yes or no), number of special problems (one, two, three or more), and number of special skills (one, two, three or more). It is important to reiterate that the last three variables—requiring special needs, number of special problems, and number of special skills—are variables that were defined and measured through EDI. We have used these variables in our analysis

² More detailed information on this and other instruments, such as their reliability and validity, is given in Muhajarine et al, 2007. *An Evaluation Framework for Saskatchewan Kindergarten Programs, Phase One*. Saskatoon, SK: Community-University Institute for Social Research.

because they provide some greater context to the students' outcome measures as do the other basic demographic variables used with our quantitative data.

Early Childhood Classroom Observation Measure (ECCOM)

The Early Childhood Classroom Observation Measure (ECCOM) assesses classroom environment and interaction in classrooms with children ages 2.5 through 5 years. It seeks to account for the physical environment and the nature of instruction and interaction between children and the teacher, and between children. It was developed by Dr. Deborah Stipek at Duke University and has been reported to be a reliable and valid instrument. It was chosen because other commercially available assessments did not focus as strongly as the ECCOM on developmentally appropriate instructional practices.

Interview and focus group guides

Qualitative data include interviews with teachers in groups of two or three, and focus groups with parents in groups of five to nine. Interviews and focus group guides were compiled by incorporating major topics of concern reported in the literature review, and informed by our previous study in this topic. **Appendix B** includes the Parent Interview and Focus Group guide and **Appendix C** includes the Teacher Interview Guide.

DATA COLLECTION METHODS

Each of the three school divisions that participated in the evaluation identified contacts who distributed materials to teachers, provided school contact information to help plan interview and focus groups, and provided debriefing (with assistance from a member of the evaluation team) and assistance to their teachers with the selected instruments. Each division received an initial package with a study overview, which was followed by updated study overviews and new requests for assistance at bi-weekly and then monthly intervals during each stage of the study, data collection, and data analysis.

Standardized instruments

Using standardized instruments (SSRS, TERA-3, EDI) data were collected by teachers and forwarded to the division contacts. Teachers were familiar with some of the instruments, such as the EDI, as they had used these in the classrooms before. The teachers were provided with release time to do the assessments during working hours.

One research assistant, who had training as a teaching assistant, conducted all classroom observations using the ECCOM. Two pilot tests were conducted of the classroom observations. These tests familiarized the research assistant with the ECCOM, as

well with her role in the classroom when she conducted the observations. The observations, which focused on teacher-student interactions in the classroom and on available resources, were carried out in late May and in June with a single session usually lasting two to three hours. An effort was made to conduct observations in both morning and afternoon periods for FTK and PTK classrooms in each division. The ECCOM requires that in each class a student be randomly selected and observed at one-minute intervals. Classrooms were scored using both checklists and scales. Checklists were completed during the observation, while scoring of scales took place after the research assistant had time to reflect on the observations and notes that were taken, after leaving the classroom space. Once all observations were complete, the research assistant passed these data on to the researchers for data entry.³

In-person interviews

Interviews with teachers and parents were semi-structured and followed the interview guides in Appendices A and B. The interviews took place at the school, in a private, spacious room, with refreshments provided, or in some cases, when parents were unable to come to the school, at their homes. Interviews took between thirty minutes and one hour and forty-five minutes. The interviews were recorded and transcribed, and later given assent by the participants.

Focus groups

Focus groups were semi-structured and followed the focus group guide in **Appendix B**. They took place at the school in a private, spacious room, with everyone seated in a circle, and with refreshments, child-care, and transportation provided. Focus groups took between one and two hours to complete. The focus groups were recorded and transcribed and later vetted by the participants.

Student attendance data

Attendance data were collected for each student by school administrative staff in Onion Lake and Living Sky schools, and the central office of the Saskatoon Catholic Schools provided these data for participating schools within their division. All divisions were able to provide at least two years of attendance data, including number of days of school and the actual days of attendance for each child.

³ One portion of the ECCOM requires the observer to sketch the classroom space, including where specific learning areas are, their size, and the materials that exist in these areas. In this study the research assistant took photos using a digital camera to record the physical layout, organization and resource material available in the classroom, saving considerable time and lending more accuracy. The assistant ensured that no persons were in the photographs, whether teachers, students, or staff. See **Appendix E**.

Table 4 presents the number of students for whom we had complete data for each instrument or data type by FTK/PTK status and school division.

Table 4. Descriptive Statistics for 2005-2006 School Divisions Analyses (N=322).

School Division	n	Full-Time Kindergarten (n=234)				n	Part-Time Kindergarten (n=85)			
		SSRS-T	Tera-3	EDI	Attendance		SSRS-T	Tera-3	EDI	Attendance
Onion Lake	85	70	80	69	85	0	N/A	N/A	N/A	N/A
Cree Inuit	17	17	17	16	17		N/A	N/A	N/A	N/A
English Inuit	57	52	52	53	57		N/A	N/A	N/A	N/A
Living Sky	45	44	45	42	46 *	28	27	26	26	31*
Saskatoon Catholic	107	105	100	101	107	57	54	54	54	57
Total:		217	214	212	234		81	80	80	84

Notes:

Total number of children: n=322. O.L.=85, N.B.=73, S.C.=164

* Note: there are four extra children accounted for in the attendance (1 in FTK, 3 in PTK); these children had no tests because they left early in the school year

This chapter provided an overview of the methods used in this study. The findings of the evaluation of full-time kindergarten programs in Saskatchewan are presented in the following chapters.

CHAPTER 3:

EVALUATION FINDINGS - FTK/PTK CLASSROOMS AND ATTENDANCE

The results of the evaluation of full-time kindergarten programs in Saskatchewan are presented in this chapter. Included is a description of FTK and PTK classrooms and teacher experience and qualifications as well as an analysis of student attendance in the three pilot FTK programs.

WHAT DO FTK AND PTK CLASSROOMS LOOK LIKE?

The following discussion focuses on the classroom context. It is organized into three sections: results from the ECCOM (a classroom observation measure),¹ teachers talking about their classrooms, and a commentary on the importance of the teacher for student success. A brief summary of the differences between FTK and PTK classrooms concludes the discussion.

Classroom resources

The ECCOM consists, as a tool, primarily of checklists and scales. Checklists were used to identify and record materials and spaces available in the classroom. Standardized scales on the other hand captured two kinds of instructional practices: didactic and constructive. Didactic practices “reflect a teacher controlled and directed classroom that emphasizes the acquisition of basic academic skills. The instructional program involves primarily drill and practice through oral recitation and worksheets. Social skills are not emphasized; instead of assisting students in developing social skills, the teacher minimizes peer interaction and imposes solutions when conflicts arise. Rather than child-centered, the program is based on the teacher’s predetermined (sometimes packaged) agenda” (Stipek, n.d.: 1). Constructivist practices, on the other hand are described by Stipek (n.d.) as including “shared responsibility for both management and learning; teachers actively guide and support children’s learning efforts and the development of their social skills. Clear, developmentally appropriate teacher determined instructional goals are balanced and integrated with student initiative and interests. The program is child-centered in that it is sensitive to and focused on children’s needs and interests, but not to the degree that children have complete authority.”

¹ ECCOM results are not divided into Cree Immersion and non-Cree Immersion because of the small number (2) of teachers in the Cree and non-Cree Immersion categories. While the use of these comparators for examining the experiences and qualifications of teachers were appropriate, it did not protect the anonymity of teachers, and therefore we chose not to use this level of analysis.

For more details on these didactic and constructivist practices, detailed contents of each subscale and checklist, and photos of lower and higher scoring classrooms (shown for illustrative purposes), please see the accompanying Evaluation Framework, along with **Appendix E** of this document. In short, developmentally appropriate instructional practices require the minimizing of didactic practices and maximizing of constructivist practices (Stipek, 2005).

It is important to remind the reader that the ECCOM was used in classrooms at only one point during the year, between the last week in May through June of 2006. In this way, the ECCOM is a snapshot of what the study classrooms were like, at the end of the school year, and should not be interpreted as what the physical learning environment of the classrooms were like during the year as a whole. That being said, the ECCOM is a useful tool to understand the similarities or differences between classrooms in the study in terms of spaces and materials, and instructional practices at a point in time.

In the interviews gathered for this study, there was some concern expressed by teachers about classroom size and materials, and how small classrooms and lack of materials may affect the children's learning experience. These sentiments are reflected in **Table 5**, which shows the mean number of positive characteristics or amenities available in FTK and PTK classrooms—specifically those that relate to the physical environment of the classroom or to the classroom learning material.² In terms of classroom organization, there was virtually no difference between FTK and PTK classrooms; however, PTK classrooms appears to have a slight edge in terms of being better equipped with learning materials compared to FTK classrooms (scoring 77 versus 69 out of a possible score of 100).

Notwithstanding the results of ECCOM, which slightly favoured the PTK classrooms in relation to availability of material resources, several teachers from both FTK and PTK classes remarked on the general lack of material resources available to them. As one FTK teacher stated,

[My students] color a lot because we don't have that many toys... .
So, we color a lot. We do blocks. They do puzzles.

The lack of “manipulatives”³ in some classrooms meant small group and large group activities had to take place at the same time rather than having different groups of children using these objects at different times. In addition, in some classrooms, supplementary learning material had to be provided by the schools to some students, straining resources that otherwise might be available to all students. Finally, not every classroom was located

² See “Evaluation Framework” for scales and checklists.

³ A term used to describe materials that are used in the classroom as aids in learning. Often these are objects that can be touched and felt, and manipulated with hands.

in a manner that had easily accessible bathroom. Having bathrooms easily accessible to kindergarten children was seen as very important by the majority of teachers.

Table 5. Classroom Physical Environment and Availability of Learning Materials* in FTK And PTK Classrooms.

	Physical Environment		Class Materials	
	FTK	PTK	FTK	PTK
Mean	70.13	87.53	68.88	78.98
Std. Dev	16.51	4.86	8.88	8.13
Minimum score	45.45	83.64	55.56	72.22
Maximum score	90.91	72.73	83.33	94.44
	p = .163 N=21		p = .081 N=22	

* Measured by the ECCOM.

The ECCOM produces measures of classroom environment at a more detailed level, such as presence of materials and space that would promote development of students in three areas: physical, socio-emotional, and intellectual. The next three tables report summary results from ECCOM in each of these three developmental areas of students.

The ECCOM scores indicated a significant difference between FTK and PTK classrooms in terms of availability of space and materials that facilitate gross motor skills and activities (**Table 6**). Significantly more space and materials were in place for children to engage in gross motor activities in FTK classrooms. It might be reasoned that since the PTK classrooms have shorter school days, that there is less need for materials and spaces promoting gross motor skills and activities. However, some PTK programs offer all day, every other day classes, in which case the need for adequate level of space and materials for gross motor activities and skill development would be same as for the every-day FTK classes. Regardless, it would imperative for both FTK and PTK classrooms to provide adequate space and material in their classroom environment for promoting gross motor skills development.

In terms of presence of classroom space and materials to promote and enhance dramatic play and to relate to a diverse student body, there were very little differences between FTK and PTK classrooms (**Table 7**).⁴ Although the differences between FTK and PTK classrooms were not pronounced, the average scores were quite low (scores ranging only 52 to 63 out of 100) for both types of classrooms, indicating low levels of availability of materials and space for creative play such as for drama, and materials that

⁴ Items in "Representations of Diversity" include multicultural and non-stereotypical items and materials in the classroom (such as dolls in different skin colour).

would resonate with a wide range of students from a diversity of backgrounds. Many teachers discussed that they had purchased or brought toys and learning materials from their own homes, as there was not enough available in the classroom. In fact, one parent commented that she was disappointed to find the toys that she had played with when she was in kindergarten (the same classroom in which her child now attends) were still there.

"PTK classes scored higher on the constructivist style, indicating that they generally had a more child-centered style of classroom."

Table 6. Availability of Space and Material for Gross Motor Skill Development and Activities.*

Gross Motor Activity Space and Materials		
	FTK	PTK
Mean	85.83	73.21
Std. Dev	13.25	16.81
Minimum score	62.50	50.00
Maximum score	100.00	87.50
p = .349 N=22		

* Measured by the ECCOM.

Table 7. Availability of Materials for Socio-Emotional Development.*

	Dramatic Play (Space and Materials)		Representations of Diversity	
	FTK	PTK	FTK	PTK
Mean	51.79	53.57	62.87	61.43
Std. Dev	24.44	19.67	26.90	26.73
Minimum score	0.00	37.50	0.00	10.00
Maximum score	100.00	75.00	100.00	90.00
	p = .609 N=21		p = .100 N=22	

* Measured by the ECCOM.

The ECCOM results show that PTK classrooms displayed the presence of slightly more math-oriented materials than did FTK classrooms (see **Table 8**). Of particular note is the remarkably low scores in this category for both classroom formats (50 to 52 out of possible 100). In contrast, literacy and art related material were much more prevalent in both FTK and PTK classrooms.

Table 8. Availability of Materials for Math, Literacy and Artistic Development.*

	Math Environment		Literacy Environment		Art Materials	
	FTK	PTK	FTK	PTK	FTK	PTK
Mean	49.73	51.85	73.32	73.38	70.00	70.12
Std. Dev	10.06	7.65	11.53	10.31	8.12	5.37
Minimum score	34.62	46.15	50.00	59.09	43.05	70.00
Maximum score	69.25	65.38	95.45	91.82	84.62	84.62
	p = .006 N=21		p = .622 N=21		p = .316 N=22	

* Measured by the ECCOM.

Instructional practices

Tables 9 through **11** present the results of ECCOM measures that pertain specifically to “didactic and constructivist” styles evident in the classroom.⁵ **Tables 10** and **11** further breaks down each of the two instructional styles to its specific constituent elements, classroom management, climate, and instructional style. In terms of the measures of instructional styles, PTK classes scored higher on the constructivist style, indicating that they generally had a more child-centered style of classroom instruction, especially in the Living Sky school division.

There was considerable variation in instructional practices amongst FTK teachers compared to their PTK counterparts as seen by the standard deviation and minimum and maximum scores (**Tables 10** and **11**). These variations in instructional practice, and generally lower scores in FTK compared to PTK program, could be due to the variability in teaching experience, qualifications as well as individual teacher’s teaching philosophy.

Table 9. Summary of Constructivist and Didactic ECCOM Measures* by School Division.

Division	Statistic	Constructivist		Didactic	
		FTK	PTK	FTK	PTK
Onion Lake	Mean	62.00	N/A	36.19	N/A
	St. Dev.	11.16	N/A	13.17	N/A
Living Sky	Mean	65.33	76.85	52.05	18.96
	St. Dev.	12.01	3.06	8.95	0.36
Saskatoon	Mean	72.28	72.01	27.97	29.48
	St. Dev.	4.47	1.66	9.38	4.49
ANOVA	F	2.75		2.04	
	Sig.	0.09		0.16	

* Calculated out of 100.

⁵ Both constructivist and didactic summary scores were created by adding up the item scores for each of the three relevant ECCOM subscales and taking the mean for the FTK and PTK programs. Didactic and constructivist summary measures do not include scores for math materials and instruction. This is because math materials were infrequently observed in many of the classrooms.

Table 10. Summary Statistics for Detailed Elements of the Constructivist Measure.*

Statistics	Management/20		Climate/30		Instruction/35		Instruction without math/25	
	FTK	PTK	FTK	PTK	FTK	PTK	FTK	PTK
Mean (actual score)	16.07	17.29	24.77	27.00	27.44	31.00	20.00	21.65
St. dev	2.18	0.95	3.14	0.62	5.05	2.16	3.37	1.34
Minimum score	10.00	16.00	18.00	26.00	18.00	29.00	13.00	20.00
Maximum score	19.00	19.00	30.00	28.00	33.00	34.00	24.00	24.00
ANOVA df	1		1		1		1	
ANOVA Mean Square	6.65		22.64		35.01		15.65	
ANOVA F	1.16		3.33		1.76		1.62	
ANOVA Sig	0.289		0.085		0.211		0.182	

* Constructivist interaction: observation of shared responsibility for management and learning; developmentally appropriate instructional goals are balanced and integrated with student initiative and interests; child centered (sensitive to and focused on children's needs) but children do not have complete authority.

Table 11. Summary Statistics for Detailed Elements of the Didactic Measure.*

Statistics	Management/20		Climate/20		Instruction/35		Instruction without math/25	
	FTK	PTK	FTK	PTK	FTK	PTK	FTK	PTK
Mean (actual score)	8.23	8.74	9.15	8.57	10.78	10.25	9.54	8.57
St. dev	3.28	1.86	2.61	1.61	4.64	3.30	3.84	2.82
Minimum score	4.00	4.00	5.00	5.00	8.00	7.00	5.00	5.00
Maximum score	14.00	9.00	15.00	10.00	21.00	14.00	16.00	12.00
ANOVA df	1		1		1		1	
ANOVA Mean Square	10.46		30.34		34.46		4.26	
ANOVA F	1.25		5.37		1.72		0.37	
ANOVA Sig	0.277		0.032		0.216		0.551	

* Didactic interaction: observation of teacher control; ego and directed interaction; emphasizes acquisition of basic skills; primarily drills and practice (usually on worksheets); social skills are not emphasized; minimal peer interaction and teacher enforces solutions to problems; teacher's agenda is focal point.

In terms of teaching experience (see **Table 12**), PTK teachers had more teaching experience on average than did FTK teachers, both teaching in general and teaching kindergarten specifically. Seventy percent of the PTK teachers included in the study have been teaching for more than ten years, while less than half of FTK teachers (47%) have been teaching for this long. In fact, far more FTK teachers had been teaching for three years or less compared to PTK teachers (33% to 0% respectively).

When considering teaching qualifications, there is no significant difference between FTK and PTK programs. All teachers involved in the study had, at minimum, Class 4, Professional A status.

Table 12. Teaching Experience and Kindergarten Teaching by Kindergarten Program.

Years teaching	Teaching in general		Teaching Kindergarten	
	FTK	PTK	FTK	PTK
3 or less	33.30	0.00	52.30	42.90
4 to 10	20.00	28.60	12.30	14.30
more than 10	46.70	71.40	33.30	42.90
	p = .220 N=22		p = .893 N=22	

Table 13. Teaching Qualifications by Kindergarten Program (Out of 100).

Qualification	Teacher Qualifications	
	FTK	PTK
BEd, Professional A, Class 4	86.7	85.7
BEd, Professional A, Class 5	13.3	14.3
	p=.705, N=22	

Table 14. Teacher Qualifications by Division and Kindergarten Program.

		BEd, Prof. A, Class 4		BEd, Prof. A, Class 5	
		#	%	#	%
Onion Lake	FTK	5	100.0	0	0.0
	PTK	N/A	N/A	N/A	N/A
Battleford	FTK	2	66.7	1	33.3
	PTK	2	100.0	0	0.0
Saskatoon Catholic	FTK	6	85.7	1	14.3
	PTK	4	80.0	1	20.0
		p=.600 to p=.682, N=22			

Teachers talk about their classrooms

The importance of play

Use of play in kindergarten classrooms was deemed by teachers an important element in aiding child developmental outcomes. The use of unstructured play, in the sense that children often chose their play stations and activities, was emphasized by teachers of FTK classrooms. In comparison, more of the PTK teachers discussed the need to provide structured and organized play for their students (e.g. who plays where and when). These different approaches to providing play opportunities in the FTK and PTK classrooms, as reported by the teachers themselves, were not consistent with the measures of instructional practices derived from the ECCOM instrument. The fact that FTK teachers stressed free play in their interviews but scored higher on the didactic instruction style shows that what teachers prefer as a course of action and what actually occurs in the classroom may not always be the same.

Physical development was considered by teachers to be an outcome or goal of students' play. A few PTK teachers noted that physical development was enhanced through free play activities. Physical education classes were often used to engage in large group activities. However, with respect to group play, one FTK teacher said:

You can't partner them off at the beginning of the year, though ... because partners don't work. We found partners didn't work probably until even Christmas. They just didn't work. It had to be mostly large group, teacher directed, until they learned. Like, we played a lot of "your turn, my turn," because they don't know how to share, they don't know how to take turns.

Most teachers mentioned that they try to implement physical activities in the classroom everyday, though this was mentioned less often by PTK teachers than by FTK teachers. These activities were led by the teacher herself,⁶ or by a physical education teacher. Some frustration was expressed by a few teachers about formal physical education instructions happening infrequently, such as only once every six days.

FTK and PTK teachers also agreed that both free and structured play were crucial to the socio-emotional development of kindergarten children. As one FTK teacher noted,

We try to make sure they get their playtime, because they do need it.
The social interaction, that's where they learn how to be friends.

⁶ All of the kindergarten teachers in this study are female.

The importance of small groups

Teachers viewed class size, both in its physical dimension and in the number of students, as an important determining factor in the amount of time spent in large group activities. In classrooms with larger groups, it was harder to engage all students in full-class activities. Smaller groups allowed teachers to facilitate more effective and directed instruction among the students. Many FTK teachers believed that there is more opportunity in FTK for small group and individual activities, given the extra time available with the students in the program. For those FTK teachers who had worked with the part-time program in the past, they found that they were currently spending more time in small group than in large group activities.

"Many FTK teachers believed that it was easier to evaluate children in the FTK program because they had more time to get to know their students."

The importance of teaching assistants

When working in large groups (e.g. class walks, field trips), all teachers found it useful to have a teaching assistant or aide in the classroom. This helped the learning process as there were more adults to guide students and help them to stay on-track. Teachers stated that teaching assistants were helpful in small group and individual activities, especially with those students who had special needs. The number of teaching assistants assigned to the classrooms appeared not to depend on the PTK/FTK status but rather on the number of designated special needs children in a given classroom. A few teachers who co-taught in the same school spoke about the advantages of having two kindergarten teachers working on the same program and that having this extra support was beneficial to them, personally, and that this benefit most likely extended to the children as well.

Time needed for student assessment

Some teachers reported that even in the FTK program, there was not much time to assess children's progress in the classroom. In fact, FTK teachers who taught PTK in the past reflected that they were amazed how they had managed to accomplish everything that needed to be done, including assessing their students, in a shorter school day. Many FTK teachers believed that it was easier to evaluate children in the FTK program because they had more time to get to know their students. As one FTK teacher said regarding the assessment of her students,

I have a better handle on where the kids are ... and I think it's more accurate than what it was with the half time. I have more things to pull from. I have more chances to observe and to write things down. I don't feel nearly as rushed and hurried to come up with the information for the report cards as I did on the half time. But then we're also dealing with half of the number of children that we were dealing with before.

FTK teachers also found that, as a result of on-going assessment throughout the school year, they had more time to individualize instruction or provide one-on-one help to students who may need it. In talking about advanced learners, one teacher mentioned that different activities were systematically set up in order to facilitate different levels of learning. This way, a student is able to work at his or her own level of ability. An advantage of free play for teachers is that it may give them time to focus on one-on-one work with children who need the extra help. As well, FTK teachers mentioned that they felt that the full time program afforded them the ability to use free play time to finish other activities, if need be, or for assessment/ observation purposes.

Surprisingly, given the concerns expressed by some FTK teachers, not all PTK teachers believed that their time was stretched when it came to student evaluation. This was because some PTK teachers reported that they performed student evaluations on an ongoing basis rather than periodically. However, PTK teachers who taught multiple classes reported that more time was required of them to perform student evaluations.

Teaching the curriculum

Given the obvious difference in the amount of time teachers have with their students in the FTK and PTK programs, do teachers believe that the curriculum is covered adequately in both programs? The perception among many FTK teachers is that since PTK teachers have less time available in class, less of the curriculum may be covered in the PTK programs. Teachers who taught PTK, however, maintained that they covered the core lessons in the curriculum, albeit with fewer examples and themes to support the lesson.

The FTK teachers' perception that PTK teaching meant covering less of the curriculum, or covering the curriculum in less depth, is important because it hints at possible reasons behind the ECCOM summary scores for FTK and PTK in terms of didactic and constructive styles of teaching. Perhaps there are underlying pedagogical differences between FTK and PTK teachers in the approach they use in programming a kindergarten classroom. For instance, do FTK teachers feel they need to have "something to show" for the extra time available with the students? Teachers' beliefs about the purpose of kindergarten were fundamental in the way that they (and their students) organized and interacted in the classroom. As an example, FTK teachers expressed how they intentionally taught social skills, making time for it, while PTK teachers tended to encourage their students to be socially competent as they engaged in other learning activities. Some PTK teachers remarked that they turned down FTK teaching positions because they felt that a pedagogical shift was necessary to teach in a FTK class and that they were unwilling to make that change at the time.

The importance of the teacher

A prevalent theme, when PTK parents were asked about their favorite part of the program, was the teacher. Parents were enthusiastic about their children's teachers and stated they were "fortunate" and "blessed" to have such good people working with their children. One PTK parent said,

It all boils down to the teacher, and I think that we've been blessed that she's got an excellent teacher.

These sentiments were not reserved for only PTK teachers. FTK parents had much the same to say about their children's teachers, as expressed by the following parent:

One of the best things about it is the teacher. She's just amazing with the kids ... I don't know anybody else that could keep the attention of twenty-five year olds, they just are glued to her and she's just amazing with them.

Many parents stressed the importance of the teacher when discussing the effectiveness of kindergarten programs. Parents stated that the length of the day was not nearly as important to success in kindergarten as was the teacher, and how she interacts with the class. One FTK parent's story about the first day in school illustrates the critical role a teacher plays in fostering a child's interest in being at school:

The first day we walked into this school, he was very scared, very upset, and he sat down. I actually couldn't even be in the room. I ended up walking out because he actually cried and he just tried to cling on to me. [It took him] two hours [to adjust]. He actually came home [that day] very happy, very excited. She [the teacher] made it feel very open, very comfortable, she just welcomed them right in, and actually just started taking them from there, and like I said, every day from then on he was just happy to be up and just happy to be going to school. The night before he would be packing his lunch. He did all of that, a lot of his things on his own, like, "I gotta go to bed, good night"... it's only 7:30 but he's gone off to bed. So he was very excited about what was coming the next morning.

"Parents stated that the length of the day was not nearly as important to success in kindergarten as was the teacher, and how she interacts with the class."

The majority of parents, both from PTK and FTK programs, were content with the feedback they received on their child's progress. A few parents said they approached the teacher at the beginning of the year and had indicated that they would need more than

the usual amount of feedback. Most communication came in the form of report cards and parent-teacher interviews or three-way conferences. Some parents also spoke to the teacher when they came to school to pick up their child, while still others saw them at community events. Some schools had an open door policy which extended to the kindergarten classroom, while other individual teachers invited parents into the classroom one day a week to take part in class activities, observe their children, and to help out.

STUDENT ATTENDANCE

While attendance data for at least two consecutive years were gathered from each division, only 2005-2006 data were analyzed for this report. School divisions routinely collect attendance data with varying degree of reliability and rigor. We judged attendance data for the current school year, 2005-2006, as most reliable to make direct comparisons between divisions, while controlling for several student characteristics. In the results we have presented in this section, we followed a few conventions. As shown in **Figure 1**, we employed solid lines to denote attendance data for our study groups, students in the FTK and Cree immersion programs. These solid trends lines are contrasted with broken lines which denote attendance data for the PTK and non-Cree immersion (i.e., English) programs. In all other figures in this section, female, Aboriginal, and younger students are designated with solid lines, while male, non-Aboriginal and older students are designated by broken lines.

When looking at attendance rates,⁷ PTK students consistently exhibited higher attendance rates than did FTK students throughout the year in the Living Sky and Saskatoon Catholic school divisions (**Figure 1**). In Onion Lake, non-Cree immersion students had better attendance rates at the beginning of the year, though this trend was reversed in the latter months of the school year.

Onion Lake attendance data

In Onion Lake, Cree immersion male students had slightly higher attendance rates than did their female counterparts (with small exceptions throughout the year), and students who were born later in the year (“younger”) showed better attendance than did their older counterparts.

⁷ Attendance rates are derived by dividing “days attended” by “possible days total student can attend” for each month, then summing the rates for each month and dividing by the total months the student was in attendance, before multiplying by 100.

Figure 1. Attendance Rates by School Division and FTK/PTK Program Status.

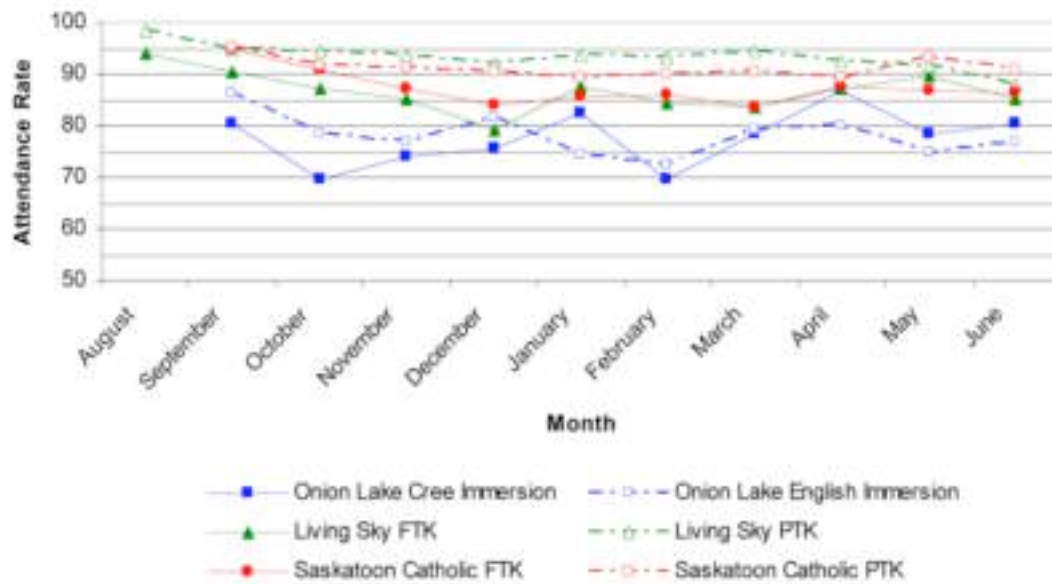


Figure 2. Attendance Rates for Onion Lake Cree and English Immersion Students by Sex, 2005-06.

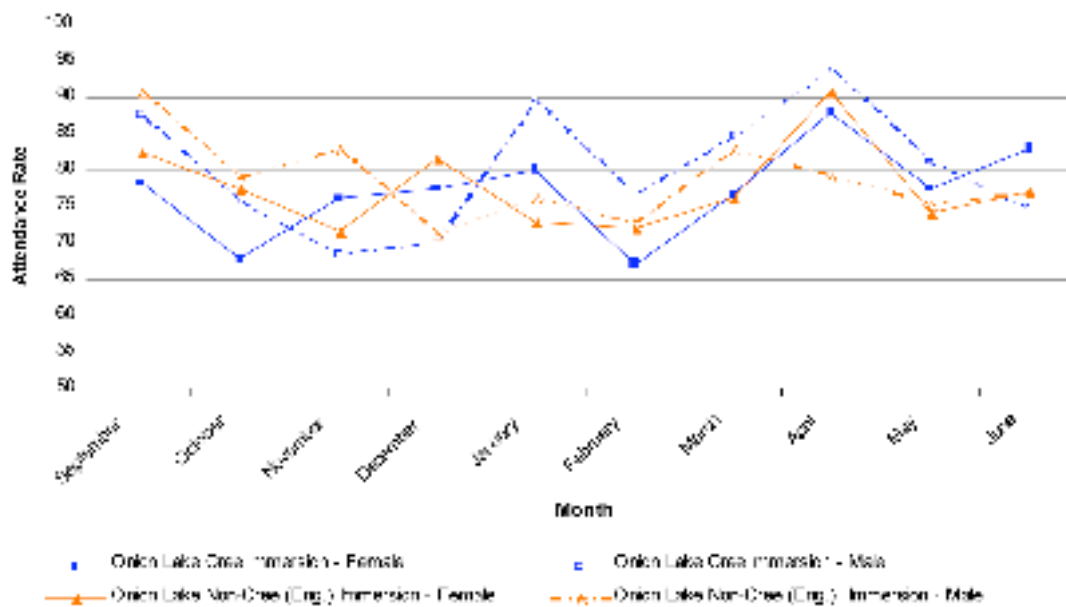


Figure 3. Attendance Rates for Onion Lake Cree and English Immersion Students by Aboriginal Status, 2005-06.

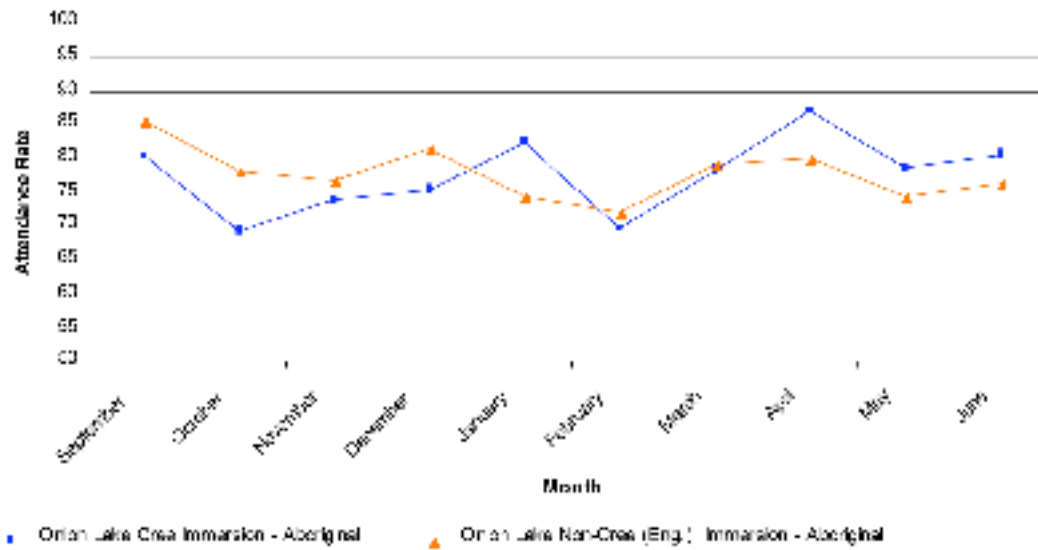
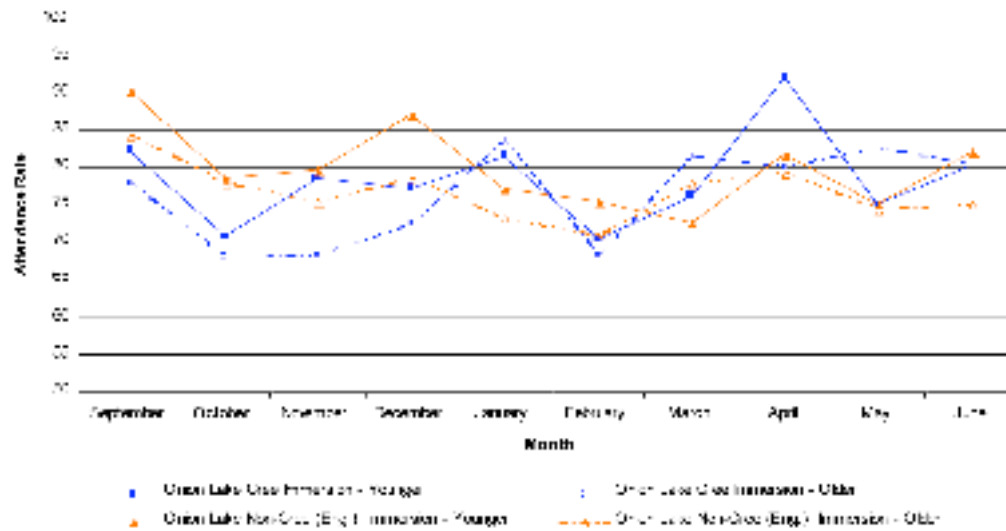


Figure 4. Attendance Rates for Onion Lake Cree and English Immersion Students by Age, 2005-06.



Living Sky attendance data

In Living Sky schools, PTK students consistently had higher attendance rates than FTK students throughout the year (with the exception of non-Aboriginal FTK students who had a higher attendance rate than the PTK Aboriginal students). Attendance rates were considerably different for Aboriginal students, female students, and for younger students. In the FTK program male students seemed to have consistently better attendance than female students; such a difference was not seen in the PTK program. Aboriginal students had notably lower attendance than non-Aboriginal students, in both programs. Age had a different effect for students in PTK and FTK programs. Younger PTK students had consistently higher attendance rates than older PTK students, while older FTK students had better attendance than younger FTK students in the program.

Figure 5. Attendance Rates for Living Sky FTK and PTK Students by Sex, 2005-06.

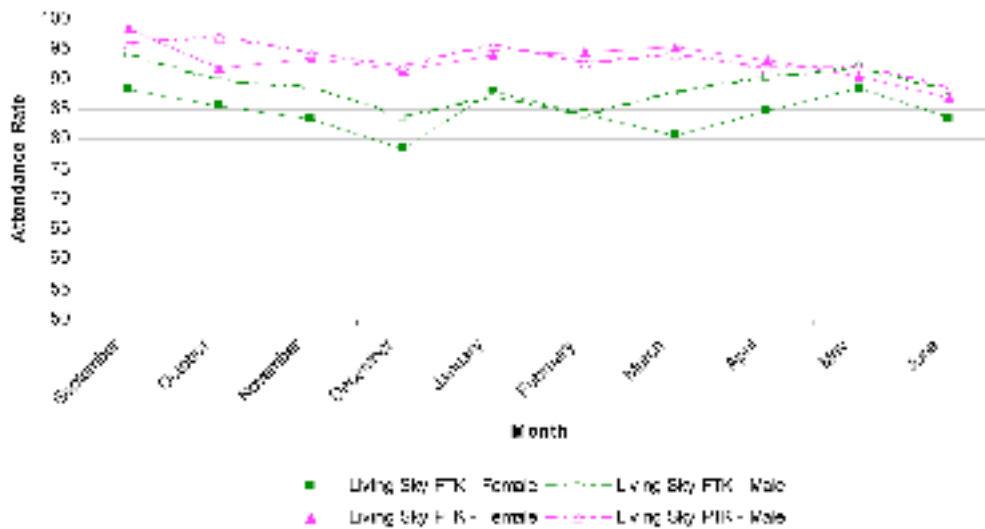


Figure 6. Attendance Rates for Living Sky FTK and PTK Students by Aboriginal Status, 2005-06.

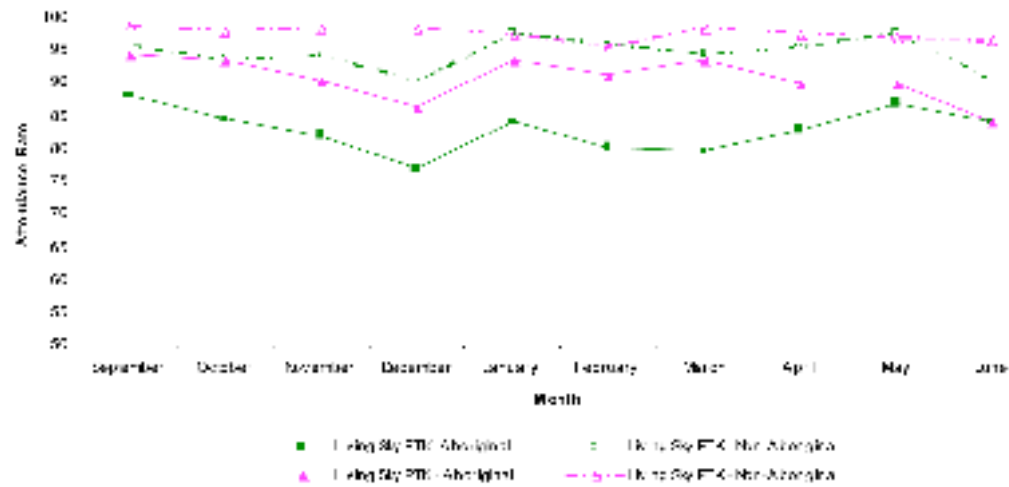
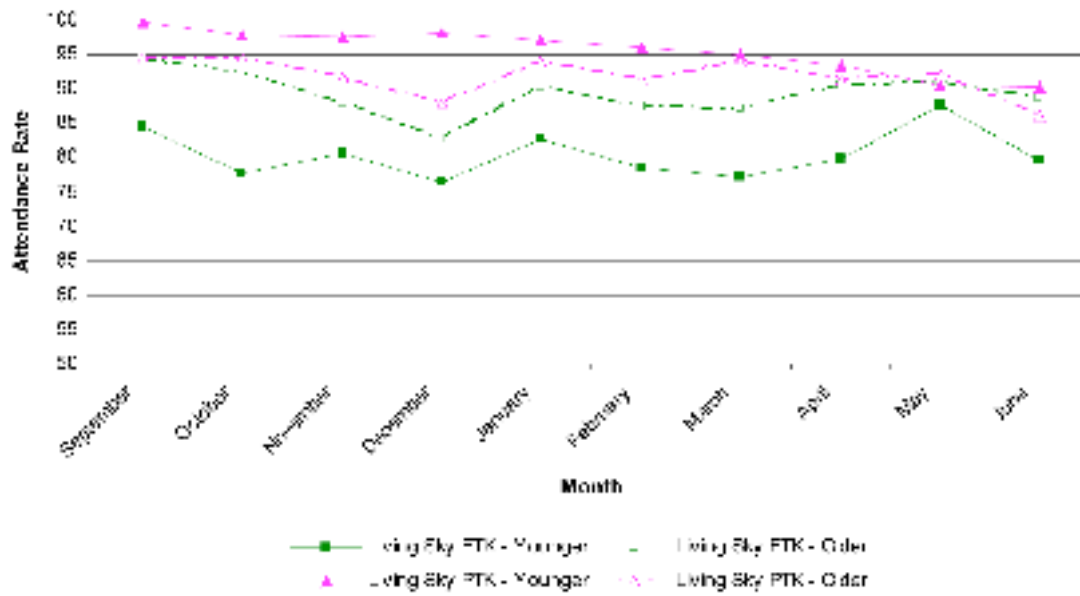
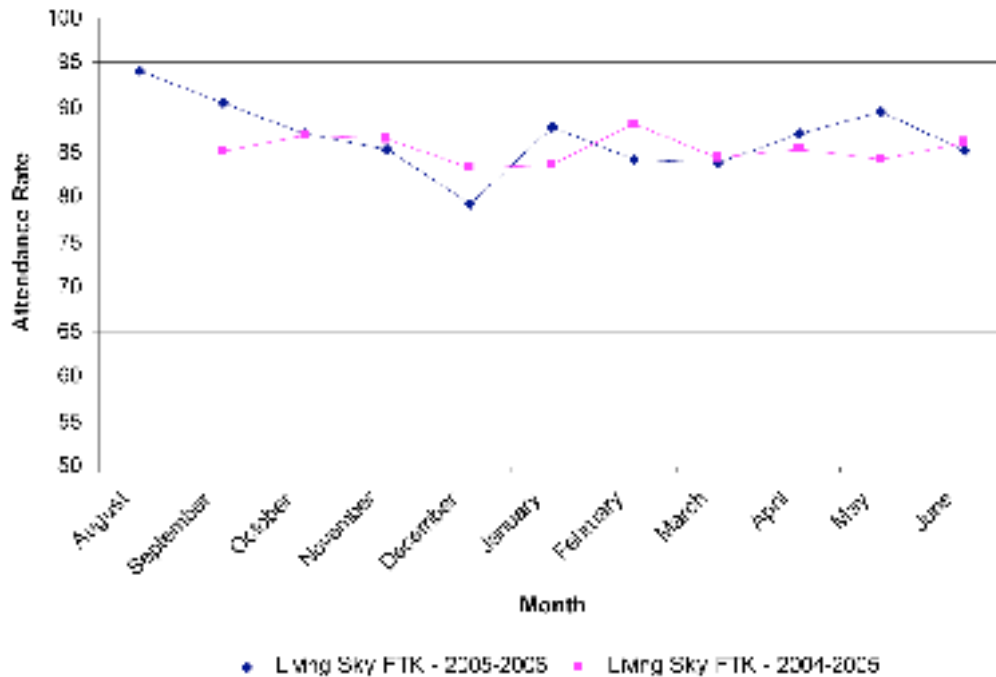


Figure 7. Attendance Rates for Living Sky FTK and PTK Students by Age, 2005-06.



When comparing attendance rates for Living Sky from the 2004-05 to the 2005-06 school year, there appears a slightly higher attendance rate for the most recent year, although the difference is minimal (See **Figure 8**).

Figure 8. Attendance Rates for Living Sky for 2004-05 and 2005-06.



Saskatoon Catholic attendance data

The attendance rates for Saskatoon Catholic students were generally high (in most cases 85% or better). When considering attendance rates by subgroups there were less clear consistent differences between males and females, younger or older, except for Aboriginal students. The Aboriginal students in FTK and PTK programs showed lower attendance rates than their non-Aboriginal counterparts throughout the school year.

Figure 9. Saskatoon Catholic FTK and PTK Attendance Rates by Sex.

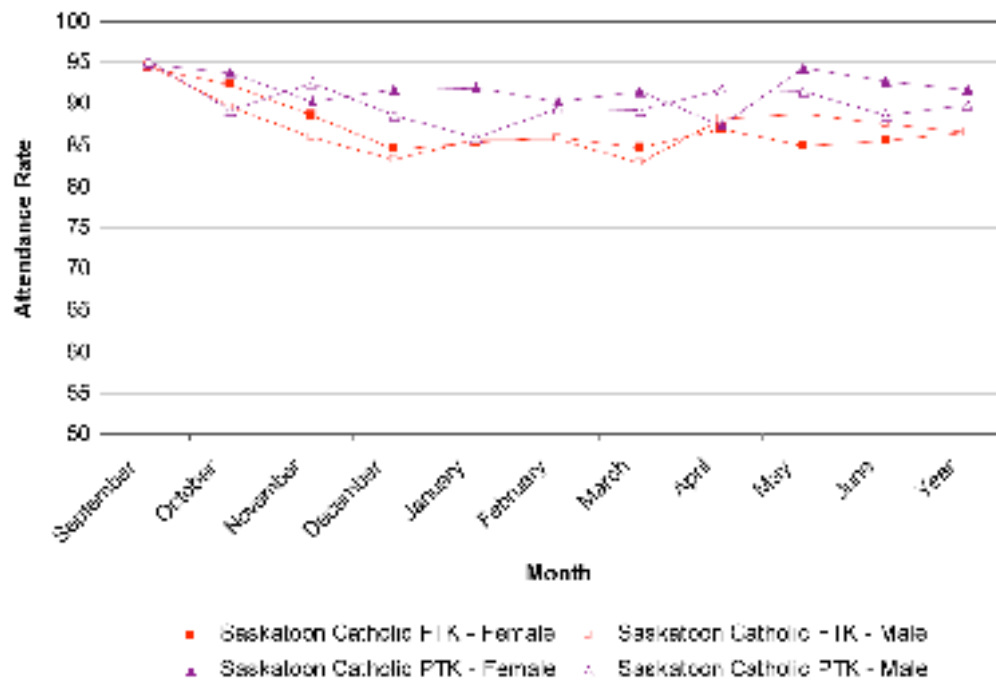


Figure 10. Attendance Rates for Saskatoon Catholic FTK and PTK Students by Aboriginal Status, 2005-06.

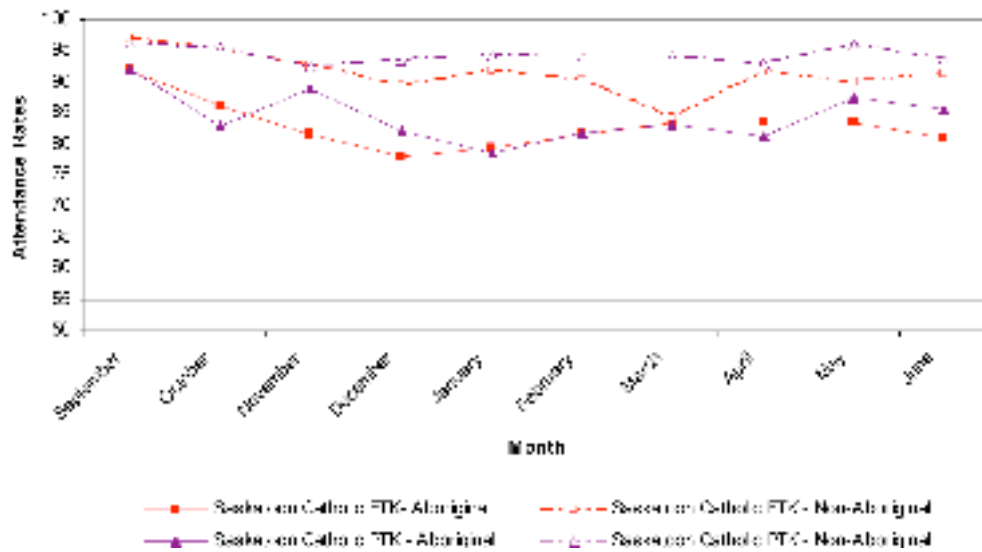
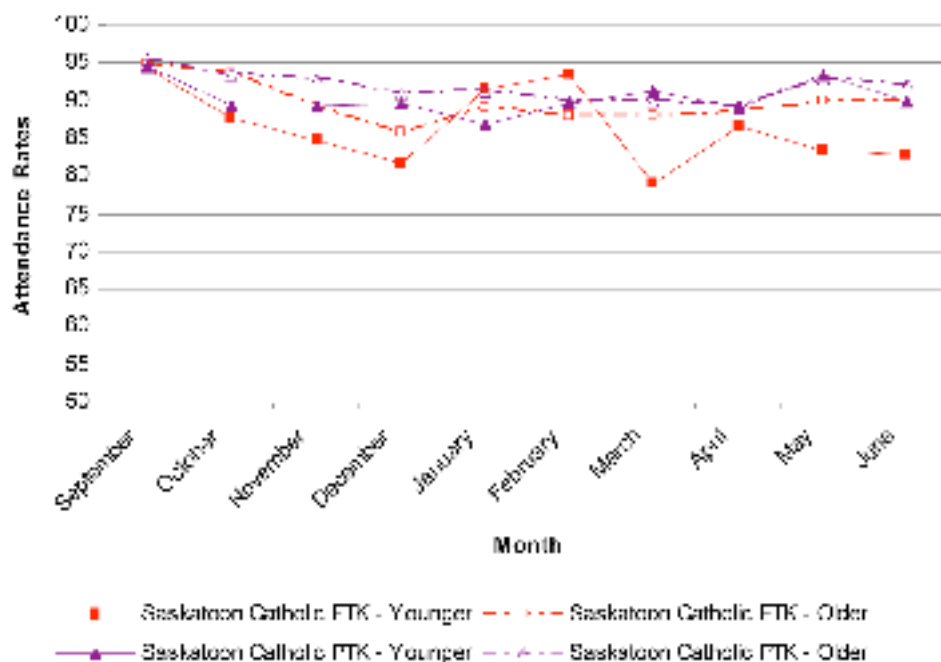


Figure 11. Attendance Rates for Saskatoon Catholic FTK and PTK Students by Age, 2005-06.



Regression analysis of attendance data

Multivariate analysis of attendance data indicated that attendance rates were significantly different for students across the school divisions and for Aboriginal students. Onion Lake students had lower attendance rates compared to those attending Living Sky and Saskatoon Catholic schools. Students of Aboriginal status had lower attendance rates than non-Aboriginal students independent of other factors (such as age, sex or school division) (see **Table 15**).

Table 15. Summary of Regression Results on Attendance Rate with School Division, Sex, Age, and Aboriginal Status as Independent Variables.

	Standardized Coefficient	t-statistic	Sig.
School Division	0.184	3.437	0.001
Sex	0.049	0.948	0.344
Age Category	0.056	1.075	0.283
Aboriginal status	-0.370	-6.933	0.000

Bold = $p < .05$

* = $p < .10$

Teachers' thoughts on attendance

When asked about attendance, teachers discussed the unpredictable attendance of some of their students. Teachers believed that while some parents appreciate the importance of getting their child to school every day for FTK, the parents may have a hard time doing so because of numerous barriers such as transportation (e.g. no car), or conflicting family obligations (e.g. multiple children, work schedules, children's health).

Teachers felt that attendance may be compounded by part-time school schedules which can be confusing given alternating days, holidays, staff development days and other variations to the school schedule. This is of particular interest given the fact that, despite the confusion appearing to surround PTK schedules, PTK attendance rates were higher in both Living Sky and Saskatoon Catholic schools (**Figure 3**) than were the attendance rates in FTK programs.

KEY FINDINGS

Following are the key findings presented in this section:

- Overall, PTK students had higher attendance rates throughout the school year than did FTK students. However, attendance rates varied significantly by school division and for Aboriginal and non-Aboriginal students.
- The classroom physical environments of the participating schools were generally conducive for learning. However, there is room for much improvement with respect to changing some aspects of the classroom physical environment and resource availability. For instance, improvements in classroom space that would aid in gross motor development and more materials for math teaching and for dramatic play are necessary.
- Teachers articulated the importance of using play as a tool (or method) for learning and physical development, the effectiveness of ability to work with small groups of students, helpfulness of teacher's assistants, and hinted at a basic shift necessary in adopting a certain teaching approach when programming for full-day schedule in kindergarten.
- Parents were very clear about the competence and dedication of the teachers instructing their children. In both programs, parents expressed unequivocal support and appreciation for their teachers.

Key findings by participating school division include:

Onion Lake

- Attendance ranged from 70% to 85%. Attendance rates were lowest in late fall and mid-spring.

- Classrooms were generally low in math and dramatic play space and resources. Cree immersion had more gross motor space and materials but Non-Cree (English) immersion generally had more resources otherwise.

Living Sky

- Attendance ranged from 80% to 90%. Though it started high, there was a general downward trend in attendance throughout the school year. PTK students, males and non-Aboriginal students tended to have higher attendance rates.
- Classrooms were generally low in math and dramatic play space and resources. FTK had more gross motor space and materials but PTK classrooms generally had more resources otherwise.

Saskatoon Catholic

- Attendance ranged from 85% to 95%. Attendance tended to be lower in the winter months with a slight upward trend towards the end of the school year. Younger students and males tended to have better attendance rates. PTK and non-Aboriginal students tended to have higher attendance rates.
- Classrooms were generally low in math and dramatic play space and resources. FTK had more gross motor space and materials but PTK generally had more resources otherwise.

CHAPTER 4:

EVALUATION FINDINGS - STUDENT OUTCOMES

Student outcomes are presented in this chapter as follows: physical development; socio-emotional development; intellectual development; and spiritual development. These student outcomes measured are consistent with the short-term outcomes identified in the program logical model in our companion report, which in turn was informed by the provincial policy document, *Children First: A Curriculum Guide for Kindergarten* (April 1994).

PHYSICAL DEVELOPMENT

Standardized measures of physical development

One component of the Early Developmental Instrument measuring children's school readiness at kindergarten is focused on physical health and wellbeing. We used the EDI's Physical Health and Wellbeing subscale to measure physical development outcome in kindergarten students in this study. Two hundred ninety-two children were evaluated by their teachers with respect to items in the EDI Physical Health and Wellbeing scale. This represents 90.6% of the total children in the study.

Potential correlates of the physical health and wellbeing scores were identified using linear regression techniques. These results are presented in **Table 16**. (Please see **Appendix D** for a primer defining what linear regression techniques mean, how these techniques work, and how to read the results from these analyses.)

In the Onion Lake school division, students who were older and had no special problems were more likely to report higher scores in physical health and well-being. There was no difference between students enrolled in Cree or non-Cree (English) immersion in terms of their physical health and wellbeing.

The results for the Living Sky school division indicated that there was no difference between students in FTK and PTK programs in terms of their short-term success in achieving good physical health and development. However, male students, those who had higher number of special skills and those who had low number of special problems had higher scores of physical health and wellbeing.

Results varied slightly in the Saskatoon Catholic division. There was a significant difference between FTK and PTK students in terms of physical health and wellbeing scores—PTK students tend to fair better than FTK students in physical health measure. Furthermore, independent of this difference, older students and non-Aboriginal students tend to score significantly higher in the physical health measure.

Table 16. EDI-Summary Results of Physical Health and Well-Being Scores Using Linear Regression for FTK and PTK Students by School Division.

Division	Independent Variables	Standardized coefficient	t-statistic	Sig.
Onion Lake	Age Category (older vs. younger)	-0.180	-1.672	0.099*
	Sex (male vs. female)	0.073	0.689	0.488
	Immersion (Cree vs. non-Cree)	0.052	0.588	0.559
	Special Needs (none vs. some)	-0.049	-0.475	0.637
	Number of special skills	-0.047	-0.373	0.710
	Number of special problems	-0.563	-5.338	0.000**
Living Sky	Age Category (older vs. younger)	-0.001	-0.011	0.991
	Sex (male vs. female)	0.204	2.622	0.011**
	FTK (vs. PTK)	-0.108	-0.875	0.385
	Aboriginal Status (non vs. Aboriginal)	0.108	0.941	0.351
	Special Needs (none vs. some)	-0.050	-0.407	0.674
	Number of special skills	0.226	1.890	0.058*
Saskatoon Catholic	Age Category (older vs. younger)	-0.171	-2.392	0.018**
	Sex (male vs. female)	0.103	1.407	0.147
	FTK (vs. PTK)	0.148	1.565	0.051*
	Aboriginal Status (non vs. Aboriginal)	0.200	2.092	0.030**
	Special Needs (none vs. some)	-0.147	-1.614	0.109
	Number of special skills	-0.068	-1.192	0.231
	Number of special problems	-0.135	-1.597	0.114

*p<0.05

**p<0.01

The transition to kindergarten

Teachers reported that students adjust fairly quickly to the kindergarten schedule. Some teachers were concerned that FTK children would be tired because of a full day's schedule, although this concern had dissipated as the school year progressed. FTK teachers commented that the children did not need naps, although they generally believed that children benefited from having a "quiet time" in the afternoon when they could read or colour.

FTK and PTK parents did not differentiate between the two programs when commenting on the successful transitions made by their children into the kindergarten programs. When asked if the children were tired in the beginning, many parents commented that their child was somewhat physically tired at the beginning of the school year (e.g. difficulty getting up in the morning), but it seldom lasted for long. The following is typical of the comments made by parents regarding the length of time it took for their child to adjust to the FTK schedule:

We noticed it tuckered him out more. He goes to sleep faster. I think the first few weeks he was tired. But then, he adjusted to it fairly well.

Other FTK parents spoke of the excitement that attending school for the first time generated among their children and the adjustments to the daily scheduled that it invariably demanded.

He was excited about it. [T]he first day of school, I thought we were going to have, like, “Don’t leave me, Mom!” type fighting thing. And he just ditched me! He took off with the teacher and the kids, and I was left standing there. I had to make sure he’s eating right, and getting him to bed on time is a big part of it, to keep him going in his energy. But, he dragged for the first couple of weeks, and then after that, he picked up, and he was right into his routine. It was just a matter of getting into his routine.

PTK parents also talked about the time required to adjust to kindergarten:

Well, there were some times for him when he said he didn’t want to go to school. He just had a hard time having to get up every morning. He was missing watching a bit of TV, and having that relaxing start to the day.

When asked if they had to make any major adjustments to accommodate the school schedule, many PTK parents responded that they had not.

As well, parents mentioned that the change of season was an important factor in maintaining their children’s energy throughout the year. For example, one FTK focus group participant discussed this issue as follows:

Has anybody else found that their kids are still tired at the end of the year? Now, my baby is, well, especially with the season. Like, she gets to stay up at night, because it’s not dark yet for her to go to sleep. And I have a heck of a time trying to get her to bed.

On the other hand, another FTK parent felt that it was not just kindergarten children that had difficulty adjusting:

But really, to be fair, when our daughter started grade one, she went through the same thing for the first couple weeks. I mean, it takes a while to get into a schedule. It’s not just in kindergarten.

Parents and teachers who had experience in both programs also stressed that a lot of difficulties with transitioning to kindergarten simply depended on individual children

and their personalities. One FTK parent used her children as an example when speaking of the ease with which her kindergarten child had adjusted:

It was a breeze. I am not surprised by how quickly she adjusted. Well, I mean, with our other daughter, she would have never left. She would have never done it [referring to FTK]. I mean, they're totally different.

Physical abilities when enrolling in kindergarten

A few FTK teachers remarked on the significant delays in physical development that some of their students had when entering kindergarten and the implications this had for determining outcomes at the end of kindergarten. Teachers found that for some children the manipulative toys available in the classroom served as a tool to increase their fine motor abilities. One group of teachers discussed how FTK had contributed to the development of these children.

I have some that are still really struggling, and I really wonder where they would be if they hadn't been here every day. Their skills have increased a lot from where they started but they didn't start at a four or a five year old level. They started at a one-and-half year level. We're now at about a three or three-and-half year level. And that's a huge step, in less than 10 months, you know. But when they're coming, they're at a stage where they don't know what to do with a pencil. They have no idea what a crayon is for. But as I said, every child has made huge steps and progressed leaps and bounds. But you also have to remember that the studies are going to show where these kids are now, and those kids that are still testing out at a three or a four year old level, probably came to us at a two year level and have made huge increases. I have a little boy that came and had no beginning sounds, he only had vowels really, and it's really hard to understand what a child's saying. You know what, he is talking away now, he's got the sounds coming, he's listening to the other kids and he's picking it up and he has increased immensely, and, as I say, I do not believe we would have been as far ahead had they not been here with us every day.

The ability to focus

FTK parents tended to speak of their child's improved ability to focus. They reported that their children were able to sit and pay attention to a given task for longer periods of time. When three FTK parents were asked whether they thought the FTK was helpful or harmful, they answered,

For the most part, I think it was good for the kids. I've noticed, you know, by being here all day that their behaviours has changed. They didn't listen and didn't sit still and now they actually sit. They're on task, they work; when they're told to be quiet, they're quiet.

Another FTK parent agreed with this, saying,

Sometimes when I walk in, he's sitting, doing something at the table which is, like, something he wouldn't have done last year. He would rather have been playing with the toys, or the blocks. But now I notice that sometimes when I walk in, he's at the table. Either cutting something, or drawing something.

Growth in physical development

Specific physical changes, as observed by teachers, include improved ability to hold a pencil, to colour within lines, to manipulate toys, and to hold and use scissors. Both FTK and PTK parents agreed with these findings. Parents remarked that kindergarten improved their children's printing, drawing and coloring skills as well as fine-motor skills, such as cutting with scissors. While many children exhibited these skills when entering kindergarten, parents of these children felt they improved and had refined their skills over the course of the year. Some of these skills were due, in part, to children's in-school activities. As an example, a PTK couple said,

Her colouring has really improved. She's getting really good staying inside the lines and following the same pattern of colours and directions in the same area. Scissor cutting has really improved, like she can follow the dotted lines now. At the beginning of the year, it would be a huge circle-ish type thing, now she'll follow it pretty much.

One FTK parent talked about the impressive improvement in motor skills that her child gained through real-life activities that she felt would not be available in PTK programs.

They made perogies. The kids got to crack the eggs and mix the dough. As I said, the half school, or the half days, they get to learn their basics, and they go home. The full days, they get their basics, they get to play, they get to interact, and they're taught to do every day skills. I can honestly say, when my oldest one was in kindergarten, I would have been petrified for him to have had a paring knife, cutting up vegetables. My young one helps me almost daily when I'm cooking because he's learned, in school, how to do it.

SOCIO-EMOTIONAL DEVELOPMENT

Two hundred ninety-six children were assessed by their teachers using standardized instruments with respect to specific types of achievement in relation to socio-emotional development. This represents 91.9% of total children in the study. The results from the SSRS-teacher surveys are reported in three subdomains, as recommended by the developers of the SSRS:¹ social skills, problem behaviours, and academic competence. Social skills include positive social skills such as cooperation, assertion, empathy, self-control, and responsibility. Problem behaviours include internalizing (e.g. depression) and externalizing (e.g. violent outbursts) problems, and hyperactivity. These results were standardized according to the SSRS guidelines. Sex and special needs status were accounted for in the standardization process.

Teacher-rated socio-emotional development

Descriptive results for the social skills subscale are reported in **Table 17**. Mean scores for the social skills subscale for FTK and PTK students for Living Sky and Saskatoon Catholic, and between students in Cree immersion and non-Cree immersion (English) programs were tested using one-way analysis of variance (ANOVA) analysis. **Table 17** reveals that there were no significant differences at $p < 0.05$.

**Table 17. Descriptive Statistics for Teacher-Rated SSRS Social Skills Subscale
Domain by School Division.**

School Division	n	Min-Max	Mean	Std. Error	Variance	n	Min-Max	Mean	Std. Error	Variance	ANOVA Sig.
Cree Immersion						Non-Cree (Eng.) Immersion					
Onion Lake	19	72 - 128	90.4	2.67	98.78	88	90 - 122	93.7	1.83	176.32	0.948
Full-Time Kindergarten						Part-Time Kindergarten					
Living Sky	44	98 - 120	105.5	2.615	503.009	28	92 - 120	97.4	2.535	185.298	0.817
Saskatoon Catholic	100	50 - 120	95.4	1.700	309.020	34	50 - 120	100.4	2.491	318.152	0.444

BUJ – p < .05

* = p < .10

Descriptive results for the problem behaviours subscale (**Table 18**) revealed significant differences in the mean scores for problem behaviours for students in the Cree and non-Cree immersion programs in Onion Lake. On average, Cree Immersion children

¹ The description of the SSRS above is taken from the following website from the developer of the SSRS.
<http://ags.pearsonassessments.com/group.asp?nGroupInfoID=a3400>

scored higher than their English immersion counterparts (116.0 to 97.1²), indicating that there are more problem behaviours among students in the Cree immersion program. FTK and PTK children in both the Living Sky and Saskatoon Catholic school divisions showed significant differences on the problem behaviours subscale, with FTK children scoring higher compared to PTK children (106.5 vs 98.1 and 101.5 to 94.3, respectively). In short, Cree immersion students in Onion Lake and FTK students in Living Sky and Saskatoon Catholic schools tend to more likely exhibit problem behaviours than their non-Cree immersion and PTK counterparts.

Table 18. Descriptive Statistics for Teacher-Rated SSRS Problem Behaviours Subscale Domain by School Division.

School Division	n	Min-Max	Mean	Std. Error	Variance	n	Min-Max	Mean	Std. Error	Variance	ANOVA Sig.
			Cree Immersion					Non-Cree (Eng.) Immersion			
Onion Lake	10	85 - 108	106.0	1.952	149.619	33	85 - 127	97.1	1.565	128.825	0.000
			Full-Time Kindergarten					Part-Time Kindergarten			
Living Sky	41	88 - 120	106.5	2.416	253.903	27	88 - 125	98.1	2.179	130.225	0.002
Saskatoon Catholic	102	88 - 142	101.5	1.643	275.202	54	88 - 134	94.3	1.710	107.940	0.006

Leik = >0.05

* = p < .05

Descriptive results for the academic competence scale showed similar overall mean scores for students in each of the school divisions (see **Table 19**). Specifically, results show that the mean scores for SSRS Academic Competence subscale did not significantly differ between students attending the FTK and PTK programs (also **Table 19**).

Table 19. Descriptive Statistics for Teacher-Rated SSRS Academic Competence Subscale Domain by School Division.

School Division	n	Min-Max	Mean	Std. Error	Variance	n	Min-Max	Mean	Std. Error	Variance	ANOVA Sig.
			Cree Immersion					Non-Cree (Eng.) Immersion			
Onion Lake	10	74 - 96	81.6	2.558	197.257	32	87 - 115	91.7	1.887	204.094	0.024
			Full-Time Kindergarten					Part-Time Kindergarten			
Living Sky	41	80 - 115	90.3	2.582	267.892	27	84 - 115	90.7	2.264	172.548	0.085
Saskatoon Catholic	102	82 - 115	90.8	1.187	147.587	52	84 - 115	89.3	1.884	179.087	0.419

Leik = >0.05

* = p < .05

² All scores in the problem behaviours subscale are out of a total of 145.

Correlates of teacher-rated socio-emotional development

SSRS-teacher rated data for each of the three subscales mentioned above were further analyzed using linear regression separately for each school division. In all three school divisions, social skills scores did not differ significantly for students in FTK programs compared to students in PTK programs after controlling for other variables (for Onion Lake the comparison was between Cree immersion and non-Cree immersion—English—students). However, depending on the school division, significant correlates of social skills scores included age, sex, Aboriginal status, number of special skills, or number of special problems. Children born earlier in the birth year, male students, children of non-aboriginal background, fewer special problems, or had higher number of special skills had higher social skills scores.

Table 20. Significant Correlates of Teacher-Rated Social Skills Development (SSRS) for Students Enrolled in Each School Division.

School Division	Independent Variables	Standardized Coefficient	t-statistic	Sig.
Onion Lake	(Constant)		8.450	0.000
	Sex (male vs. female)	-0.215	-1.755	0.085*
	Age Category (older vs. younger)	-0.262	-2.104	0.039
	Immersion (Cree vs. non-Cree)	0.070	0.472	0.638
	Special Needs (no vs. yes)	-0.121	-1.029	0.307
	Number of special skills	0.118	1.143	0.257
	Number of special problems	-0.293	-2.341	0.022
Living Sky	(Constant)		11.400	0.000
	Sex (male vs. female)	-0.342	-3.293	0.002
	Age Category (older vs. younger)	-0.071	-0.709	0.481
	Kindergarten (FTK vs. PTK)	0.062	0.732	0.467
	Special Needs (no vs. yes)	0.173	1.436	0.143
	Number of special skills	0.468	4.746	0.000
	Number of special problems	-0.263	-2.224	0.030
Saskatoon Catholic	(Constant)		17.260	0.000
	Sex (male vs. female)	0.051	0.639	0.482
	Age Category (older vs. younger)	-0.192	-2.636	0.009
	Kindergarten (FTK vs. PTK)	-0.038	-0.529	0.598
	Special Needs (no vs. yes)	0.074	0.781	0.430
	Number of special skills	0.058	0.732	0.430
	Number of special problems	-0.267	-2.341	0.004
Saskatoon Catholic	Aboriginal Status (no vs. yes)	-0.384	-5.255	0.000

Bold means $p < 0.05$

* means $p < 0.10$

Multivariate regression results of problem behaviours scores are presented in **Table 21**. As shown, for Onion Lake, Cree Immersion students were more likely than non-Cree (English) immersion students to score high in the problem behaviours subscale. For Living Sky and Catholic Schools, students who are enrolled in the FTK were more likely to have scored high in the problem behaviours than the PTK students. In addition, in each of the school divisions, several other correlates were significantly associated with problem behaviours, although not all of these significant correlates were the same for all three school divisions.

"For Living Sky and Catholic Schools, students who are enrolled in the FTK were more likely to have scored high in the problem behaviours than the PTK students."

Table 21. Significant Correlates of Teacher-Rated Problem Behaviours (SSRS) for Students Enrolled in Each School Division.

School Division	Independent Variables	Standardized Coefficient	t-statistic	Sig.
Onion Lake	(Constant)		10.549	0.000
	Sex (male vs. female)	0.147	1.730	0.089*
	Age Category (older vs. younger)	0.105	1.205	0.233
	Immersion (Cree vs. non-Cree)	-0.377	-3.636	0.001
	Special Needs (no vs. yes)	0.044	0.537	0.593
	Number of special skills	0.197	2.015	0.048
	Number of special problems	0.518	5.960	0.000
Living Sky	(Constant)		12.193	0.000
	Sex (male vs. female)	0.227	2.102	0.040
	Age Category (older vs. younger)	0.034	0.331	0.742
	Kindergarten (FTK vs. PTK)	-0.375	-3.268	0.002
	Special Needs (no vs. yes)	-0.325	-2.704	0.009
	Number of special skills	-0.482	-4.242	0.000
	Number of special problems	0.189	1.378	0.174
	Aboriginal Status (no vs. yes)	-0.108	-1.012	0.313
Saskatoon Catholic	(Constant)		15.102	0.000
	Sex (male vs. female)	-0.036	-0.470	0.639
	Age Category (older vs. younger)	0.154	2.018	0.045
	Kindergarten (FTK vs. PTK)	-0.171	-2.192	0.030
	Special Needs (no vs. yes)	-0.017	-0.172	0.864
	Number of special skills	-0.011	-0.148	0.883
	Number of special problems	0.176	1.844	0.067*
	Aboriginal Status (no vs. yes)	0.289	3.771	0.000

Bold means $p < 0.05$

* means $p < 0.10$

Turning to the academic competence subscale, as shown in **Table 22**, there were no statistically significant differences in academic competence between Cree versus non-Cree (English) immersion students, or between FTK students versus PTK students. However, several other variables were significantly correlated with academic competence, and these variables tend to be different in each of the three school divisions studied.

Table 22. Significant Correlates of Teacher-Rated SSRS Academic Competence Subscale for Students Enrolled in Each School Division.

School Division	Independent Variables	Standardized Coefficient	t-statistic	Sig.
Orion Lake	(Constant)		8.054	0.000
	Sex (male vs. female)	-0.076	-0.714	0.478
	Age Category (older vs. younger)	-0.254	-2.304	0.025
	Immersion (Cree vs. non Cree)	0.029	0.748	0.457
	Special Needs (no vs. yes)	-0.108	-1.032	0.306
	Number of special skills	0.347	2.786	0.007
	Number of special problems	-0.518	-4.798	0.000
Living Sky	(Constant)		10.791	0.000
	Sex (male vs. female)	0.191	1.763	0.083*
	Age Category (older vs. younger)	-0.109	-1.054	0.296
	Kindergarten (FTK vs. PTK)	0.055	0.737	0.464
	Special Needs (no vs. yes)	0.258	2.137	0.037
	Number of special skills	0.359	3.281	0.002
	Number of special problems	-0.466	-3.797	0.000
	Aboriginal Status (no vs. yes)	-0.056	-0.536	0.594
Saskatoon Catholic	(Constant)		19.820	0.000
	Sex (male vs. female)	0.172	2.389	0.018
	Age Category (older vs. younger)	-0.249	-3.494	0.001
	Kindergarten (FTK vs. PTK)	0.007	0.094	0.925
	Special Needs (no vs. yes)	0.128	1.420	0.158
	Number of special skills	0.241	3.368	0.001
	Number of special problems	-0.356	-3.993	0.000
	Aboriginal Status (no vs. yes)	-0.180	-2.520	0.013

Bold means $p < 0.05$ * means $p < 0.10$ **Teacher observations of socio-emotional development**

Several FTK teachers and one PTK teacher mentioned that some children come to school without the ability or patience to play with other children. For example, some children would hit others with toys, throw toys, or destroy things, and would not participate in active play. However, as the year progressed, teachers found that they were able to “teach” children how to play and get along with their peers. Teachers observed that the number of children exhibiting disruptive social behaviours (e.g. hitting, throwing, yelling) at the beginning of the year were reduced at the end of the year. As one teacher noted,

I think that's when we really see how well they relate to each other and play with each other. I guess that's the only time you can really tell which ones are having trouble, are more immature and not ready, and you can guide them how to get along with others, and encourage someone to come play with them.

Teachers from both programs found that some children were socially withdrawn when entering the kindergarten program. As described by one teacher,

And they know how to put that wall up so that you're not going to get too close, because if I let you get too close, you're going to hurt me. And so they put the wall up, and it takes a long time to break that wall down.

Other teachers taught children who were used to having more freedom in their lives. Kindergarten, however, required these students to be more flexible in their interactions with other students and with the teachers. One teacher expressed her view,

It's hard to break the five years of independency so to speak, because they've been able to do what they want, when they want.

Through the use of small-group activities (e.g. centre time) children in both programs developed a sense of play, learning how to compromise, share, and work with others. Children were encouraged by their teachers in both programs to make their own choices, to develop the ability to make (and keep) friends, and to try new things. Many teachers felt that social or play time needs to be child-directed. One FTK teacher provided an example of a student who, after finishing her work, circulated throughout the class helping other students.

Teachers also talked about the relationships among the students in the school. Some teachers stated that FTK students probably felt like they were part of the school community more than PTK students did about their "place" in the school community. This feeling of belonging was attributed to their daily attendance as well as to family connections they already may have had inside the school (e.g. older siblings). The teachers also identified benefits for older students in the school who had more opportunity to interact with the younger children and to serve as role models to the younger students.

"Many teachers felt that social or play time needs to be child-directed."

Several teachers from both PTK and FTK programs found opportunities to create interactions with older students (e.g. lunch monitors) or activities with other kindergarten students (e.g. gym) if there was more than one kindergarten class in the school. Some activities were formal learning/intellectual activities where students learned from and interacted with each other. Other activities were incorporated less formally such as in a playtime, recess or snack time taken with other students. These types of activities were more evident in FTK than PTK programs.

Teachers from both FTK and PTK programs mentioned that children remained a very tight group even outside the classroom. They took care of each other and made sure that everyone in their class was part of their play group. For the PTK teachers with two classrooms, this observation led to the development of social activities that both classes could participate in. They felt this would prepare the children for grade one when they may not have the opportunity to be together in the same classroom.

Parents' observations of children's socio-emotional development

Teachers' observations of socio-emotional changes in children were supported by findings from the parent interviews and focus groups, as seen below. Observed changes in children by parents include an increased ability to work and to get along with others, less egocentric play, increased self confidence, better understanding of conflict management (e.g. communicating through speech instead of hitting or biting) and asking for things instead of demanding them.

Increased self-confidence

Both PTK and FTK parents indicated they had seen significant improvements in their child's confidence from the beginning to the end of the school year. As one PTK parent explained,

I think confidence is the main thing I think I've seen change in her. Not that she wasn't confident in September, but she's so much more confident now than she was in where she is in the classroom, where she belongs, you know, who she has to play with and out at recess, just knowing how to deal if there is any problems.

Another FTK parent reiterated this, saying,

She matured lots, she's got more self-esteem. She's more confident, she's not afraid to go walk up and ask questions when she wants to know something, like the way she used to be. She used to be so shy. But there's a big difference in her now. She's more confident, more mature.

Improved communication skills

According to the parents who participated in this study, children in both FTK and PTK programs were more independent at the end of the school year than at the beginning of the year. Further, substantially more FTK than PTK parents felt that their children had become better communicators. One FTK parent attributed the change in her son's ability to communicate to

the intense work that they did with him. Not only that, the feelings that they learn in school if they were happy, if they were tired, if they were afraid, if they were scared. He's actually able to sit there now and just say, "Mom, I'm very angry" if something doesn't go his way, "I'm very angry right now."

Less egocentric play

Many FTK parents also said they had seen significant improvements in their children's ability to share with others and take turns. One FTK parent said,

I know that he likes to be the first. Now, I think that has changed a little bit, where he's able to let somebody else do something. Whereas before, it would be, "No, I want to do it. No, I'm the leader." It [was] me, me, me! Now I notice that he's able to let another kid be a leader or do something. He's not as me-oriented as he was before.

Enhanced enjoyment of social play

It is important to note that some caregivers were not able to attend specific student or school activities due to scheduling difficulties, which in some divisions meant their child was also unable to attend these events. This proved to be frustrating for some caregivers and certainly for their children. When children were able to attend and take part in activities, they had fun. One FTK parent described her son, when participating in these activities, as being "free" and "full of wonder." This sense of possibility was not limited to formal in- or out-of-school activities but extended to the program in general. The social aspect of kindergarten ("playing" and "sitting in circles and singing") was pointed out by parents as their children's favorite part of the program. Parents also said that their children felt that the weekends were too long and that they looked forward to going back to school.

A few parents mentioned that they saw no difference in the socio-emotional development of their children from the beginning to the end of the year. More PTK parents than FTK parents felt this way.

INTELLECTUAL DEVELOPMENT

This section of the report focuses on intellectual development of students in kindergarten, primarily the development of early literacy skills. Early reading ability was measured using the Test of Early Reading Ability, Third Edition or TERA-3, a measure further subdivided into three specific reading skills: alphabet, conventions, and meaning. Alphabet scores reflect children's knowledge of the alphabet and its uses. Conventions scores reflect student's knowledge of the conventions of print. Meaning scores reflect students' ability to construct meaning from print words. Results are presented first in terms of overall reading quotient scores,³ and then for specific measures, as standardized scores (meaning age and grade equivalency scores are presented). Overall reading

³ Overall reading quotients are derived by summing the scores from the three subscales listed above, alphabet, conventions, and meaning.

quotient scores are summary measures that are used to compare students' overall early reading ability *between* programs. Standardized scores for each specific measure are used to illustrate the extent to which students *within* a program may have achieved expected scores for their age and grade level.

Overall reading quotient scales

In order to determine whether differences in overall reading quotient scores between Cree immersion and non-Cree (English) immersion students in Onion Lake, as well as between FTK and PTK students in Living Sky and Saskatoon Catholic schools, were statistically significant an analysis of variance (ANOVA) was conducted. **Table 23** displays these ANOVA results. The reading quotient showed a highly significant ($p < 0.001$) difference between the Cree immersion and non-Cree immersion groups (**Table 23**). Cree immersion students scored substantially lower than their non-Cree immersion counterparts. This finding was not surprising given that the TERA-3 was not developed for use with children in Cree immersion programs, and illustrates the need to develop more culturally appropriate assessments for early literacy skills in predominantly non-English speaking classrooms (in this case, Cree, for example). Significant differences in overall reading ability between FTK and PTK students were observed in Saskatoon Catholic schools ($p < 0.10$).

Table 23. Summary Statistics for Comparing Differences in Overall Reading Quotient Scores by School Division.

School Division	df	Mean Square	F	Sig.
Onion Lake	1	19819.080	43.392	0.000
Living Sky	1	326.762	0.632	0.429
Saskatoon Catholic	1	1844.738	3.008	0.085

Note: Onion Lake analysis compares Cree and non-Cree (English) immersion scores; Living Sky and Saskatoon Catholic analysis compares FTK and PTK scores.

Standardized measures of alphabet, print, and meaning

Figures 12 through 22 below show statistically significant results for specific reading skills measures (alphabet, conventions, or meaning) comparing Cree and non-Cree (English) immersion students in Onion Lake, and FTK and PTK students in Living Sky and Saskatoon Catholic school divisions. Each figure presents the proportion of students whose scores would place them at expected age and grade levels, below expected age and grade levels, or at higher than expected age and grade levels. The definition for each of the three age and grade equivalent performance is as follows:

- “Lower than Expected” - Students whose scores place them at grades “preschool” and the years of age “3.3” to “4.9,” are classified as performing *below* expected age and grade levels.
- “Grade and Age Equivalent” - Students whose scores place them at grades “K.0” to “K.7” and years of age “5.1” to “5.9,” are performing *at* expected age and grade levels.
- “Higher than Expected” - Students whose scores place them at grades “1” to “2.2” and years of age “6.1” to 7.3,” are performing at *higher than* expected at age and grade levels.

A brief note would further assist in understanding the bar graphs shown below. If a majority of the kindergarten children included in the study perform at levels equivalent to their grade and age, we would then see a preponderance of students in the middle region of the graphs and fewer students at either extremes (at the “tails” of the bell curve). A deviation of this bell curve pattern would show, depending on whether the curve is shifted to the right or left, whether a majority of students perform at levels equivalent to, below, or higher than the expected kindergarten grade or age.

Onion Lake - TERA-3 standardized scores

The results from Onion Lake are presented in Figures 4.12 to 4.14. Notable differences can be seen between Cree and non-Cree (English) immersion students. In the TERA-3 alphabet scores, a significant number of non-Cree immersion students scored above the expected grade and age level (meaning at grade level 1 to 2.2 and age 6.1 to 7.3 years) ($p < 0.001$, see **Figure 12**) than did their Cree Immersion counterparts. Most Cree Immersion students performed at levels lower than their expected grade and age. Similar differences were seen between non-Cree immersion and Cree Immersion students in TERA-3 convention scores (**Figure 13**). It is important to note, however, that in a Cree Immersion program the language of instruction is not English nor is there an emphasis on teaching the English alphabet and conventions. Fewer differences were apparent between the two groups in TERA-3 meaning scores (**Figure 14**).

Living Sky - TERA-3 standardized scores

Results from Living Sky division are presented in **Figures 15** through **17**. As shown in **Figure 15**, FTK students showed a bimodal trend in their alphabet scores, meaning that FTK students were likely to score at “less than expected grade level and age” and “higher than expected grade level and age,” while their PTK counterparts were likely to score at “grade and age equivalent” and “higher than expected grade level and age”

ranges (**Figure 15**). In other words, some FTK students in Living Sky performed better than expected in word recognition and use while other FTK students performed at levels lower than expected. No clear differences were seen in conventions and meaning scores between PTK and FTK students (**Figures 16 and 17**).

Figure 12. Onion Lake - TERA-3 Standardized Alphabet Scores.

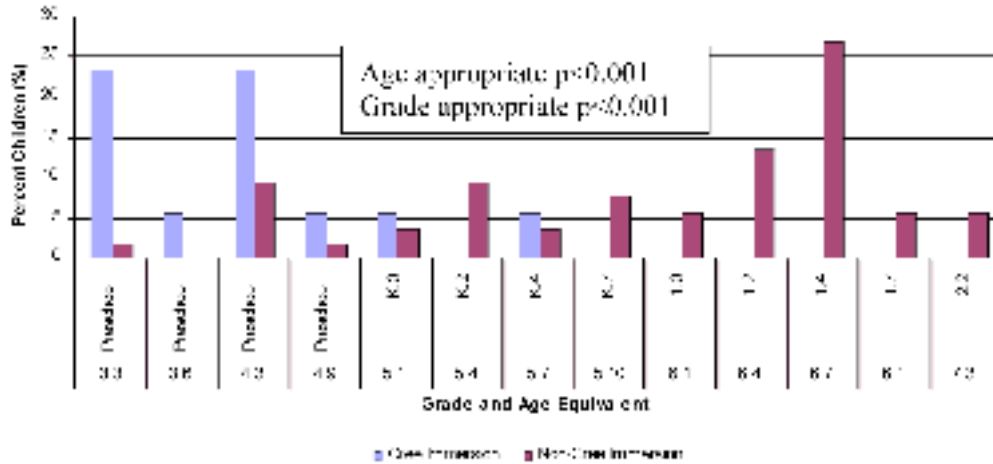


Figure 13. Onion Lake - TERA-3 Standardized Conventions of Print Scores.

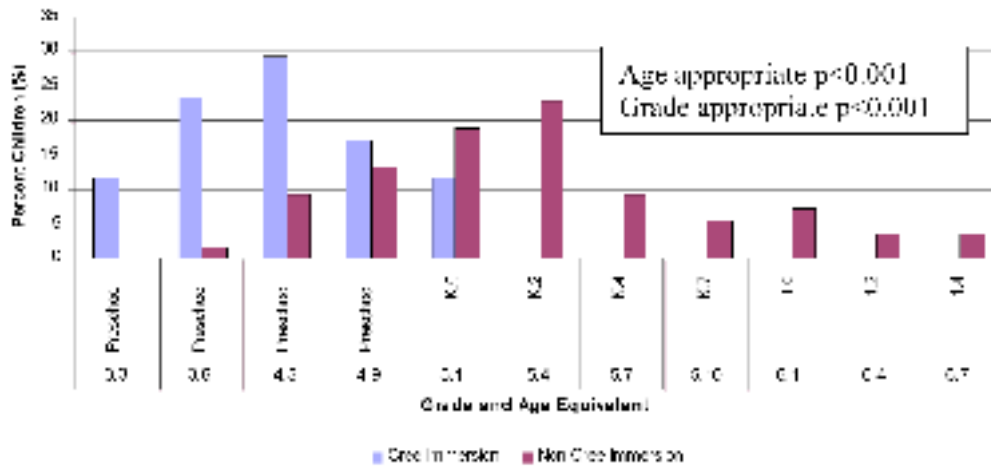


Figure 14. Onion Lake - TERA-3 Standardized Meaning Scores.

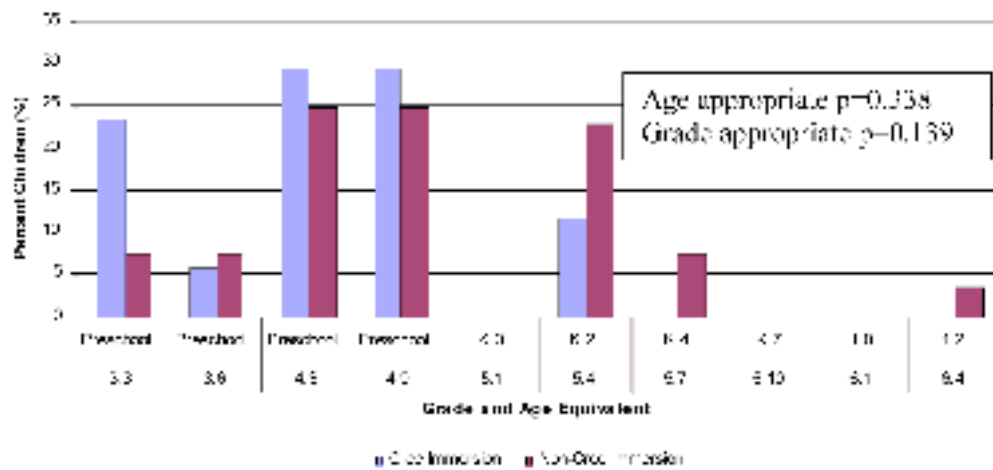


Figure 15. Living Sky - TERA-3 Alphabet Scores.

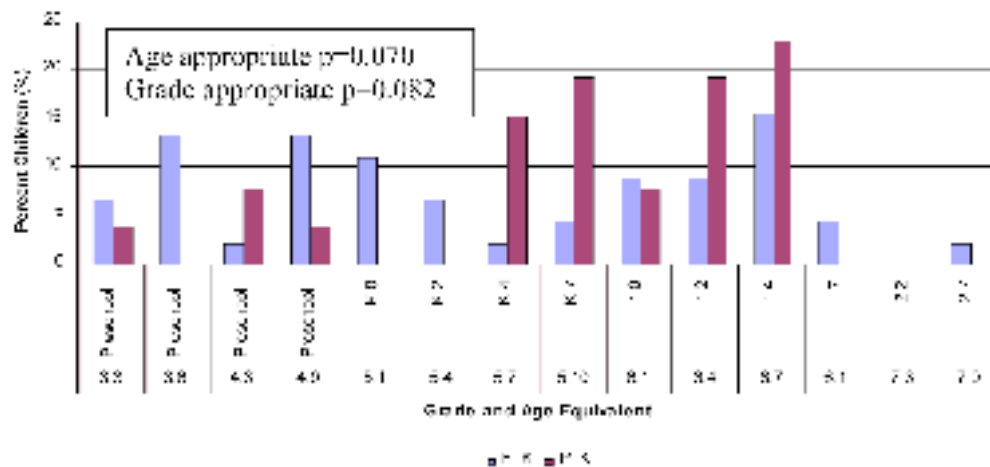


Figure 16. Living Sky - TERA-3 Conventions of Print Scores.

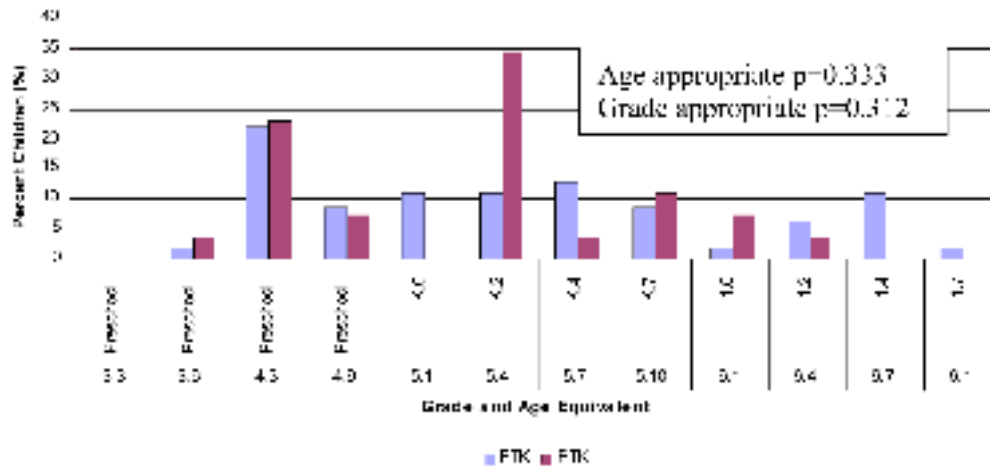
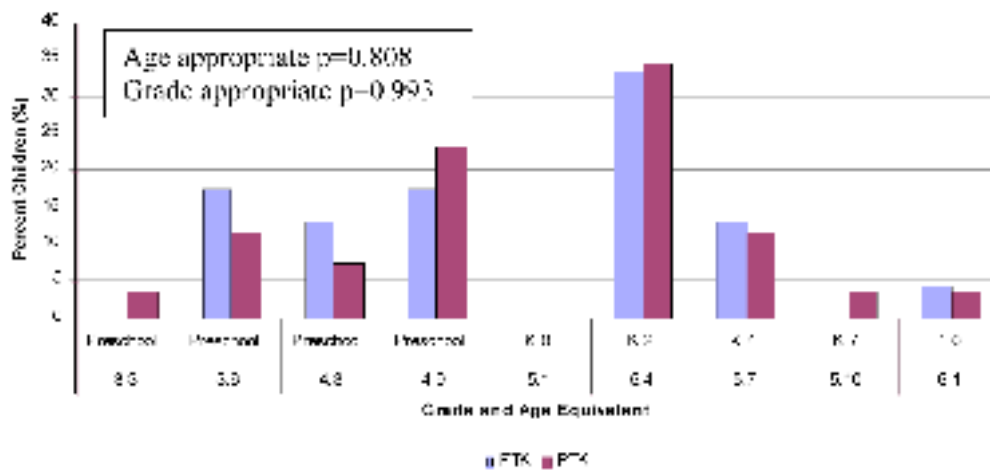


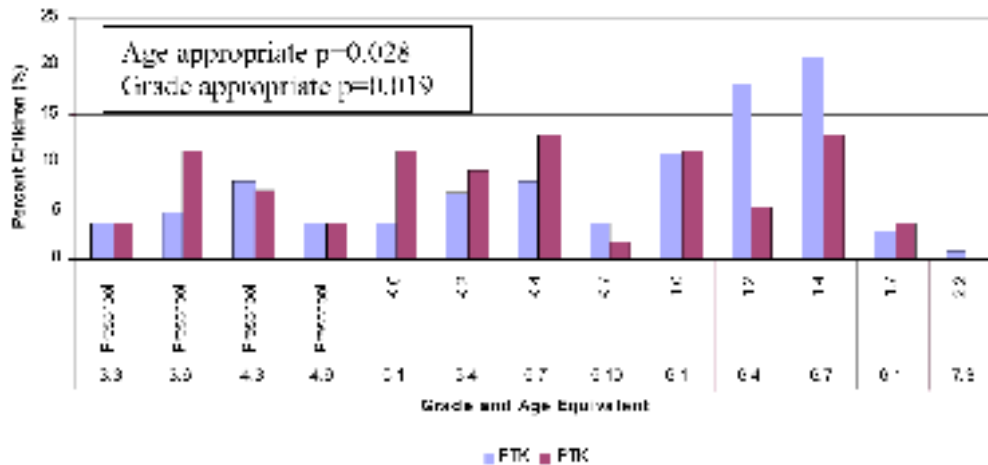
Figure 17. Living Sky - TERA-3 Meaning Scores.



Saskatoon Catholic - TERA-3 standardized scores

TERA-3 results for the Saskatoon Catholic Schools are presented in **Figures 18 through 20**. A notable proportion of FTK students had alphabet scores at levels higher than expected (i.e. grades 1.2 or above and age 6.1 or higher) while PTK students appears to score at a level expected (i.e. kindergarten or age 5.1 to 5.7). For TERA-3 conventions of print and meaning scores, generally, FTK and PTK students showed similar patterns of performance.

Figure 18. Saskatoon Catholic - TERA-3 Alphabet Scores.*



* FTK has one outlier (1%) at 8.9 years, Grade 3.7

Figure 19. Saskatoon Catholic - TERA-3 Conventions of Print Scores.

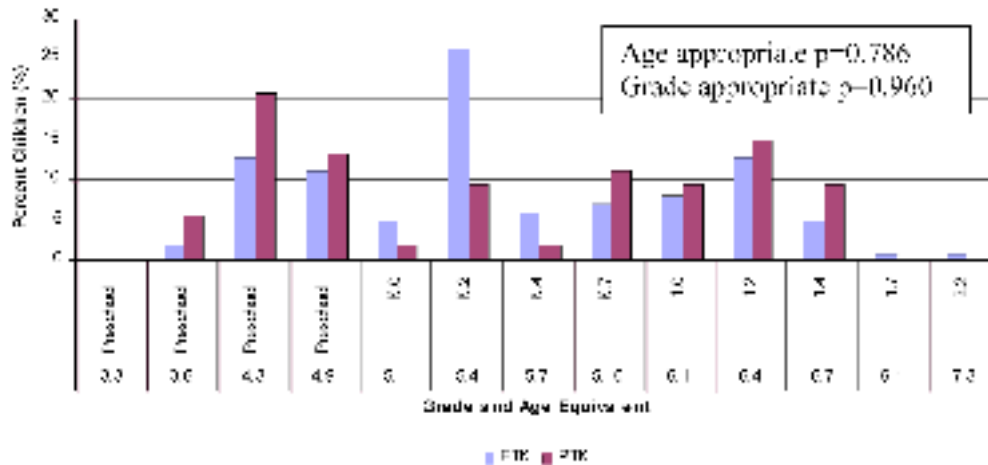
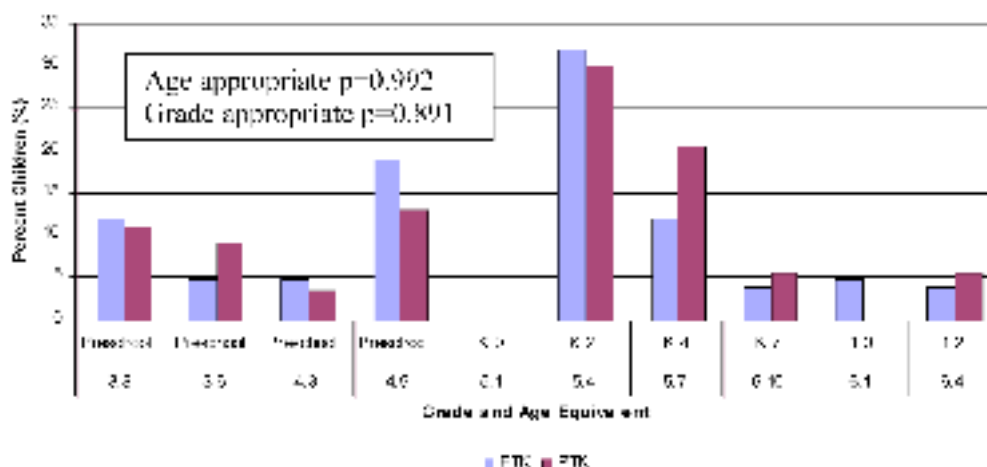


Figure 20. Saskatoon Catholic - TERA-3 Meaning Scores.*

* S.C. FTK has one outlier (1%) at 7.3 years, Grade 2.2

Teacher observations on literacy and language development

Specific intellectual changes observed by teachers in both programs included students' increased knowledge of numbers, letters, colours and seasons. Parents from both FTK and PTK programs also agreed that their children's knowledge and use of numbers, colors and the alphabet had dramatically improved over the year. One FTK parent described how her son sings his ABCs and tries to tell time. Another parent talked about her son's ability to recognize numbers,

He recognizes numbers on things, like say you're driving down the street, and you see a 7-11 sign, he'll recognize those numbers. Or when you're shopping, "That's three dollars, mom!"

Approximately three times as many FTK as PTK parents mentioned that their child had gained basic reading and printing skills. One FTK parent said,

He's really excited to sit down and show you that he can write this or print that, or they started reading and stuff like that. He's so excited with doing that and doing little flash cards with sight words and stuff like that.

Both FTK and PTK parents told stories of their child's growing intellectual curiosity and enjoyment of learning, some even self-directed. One FTK parent told it this way,

She's wanting to do more. Like, she'll come down here, we have paper all over the place. She'll get a pen, she'll start trying to put words, letters together. And she'll come up and say, "What's this word? What did I spell here?" Or if you say something, "How do you spell that?" She's wanting to learn more, she's very inquisitive.

Parents who had experienced both FTK and PTK programs often felt that FTK pushed children further in terms of literacy and general knowledge. They felt this was because their children were in school more often and for longer periods and didn't have to "catch-up" between PTK classes. As one couple explained,

He [referring to the FTK student] started bringing home little reading books that they sent home twice a week. The other two kids [referring to the PTK students] didn't. They just waited. They had that kind of stuff in grade one. So I see that as something that's pushed him a little bit farther than the other two kids were. It wasn't that they were putting a lot of pressure on him or anything like that to get to that level. I just thought that seemed like a natural progression in that they may have just got to it a little bit quicker than they did in the part-day with the other two kids.

Intellectual rigor and FTK

Many parents indicated that their children love going to school and that the children have made good advances in learning during the year. Despite this, in a few cases kindergarten (especially FTK) tired the children out mentally, and parents mentioned that the children needed a break once in a while from school. FTK parents spoke of how their child was mentally tired at the beginning of the year:

The first two weeks he was tired. But, that's because he went from summer to now, you got to get back into your eight o'clock bedtime, and no matter what, go to sleep, and get up. After the first two weeks, I think it was more mentally draining than it was physically on him. Sure, they play hard all day, but I think he was just more tired, mentally. All he wanted to do was sit around at the end of the day, and that was about it. He didn't even want to go out and play. But now he can't wait to go outside and ride his bike and play.

Another FTK parent described how it took several weeks to get used to the new schedule, even though her child was eased into the FT program at the school over several weeks.

She was a little tired at first, but it's only because your mind is used to a day at home, you're there to do your own thing, on your own time, but here it's structured. You're constantly learning, so I think she was feeling a little bit of mentally tired. Not physically, just mentally. I think, over time everything caught up with her, and she realized that this is something I do every day. [Researcher: So how long did that adjustment take?] Oh, before Thanksgiving.

One FTK parent talked about how much her son loves FTK:

I didn't even notice a difference in him. He wasn't tired. He wasn't overwhelmed. He was just ready. He was excited. He would wake up everyday, you know, Saturdays he would cry. He would wake up Saturday, "Okay, let's pack my lunch! Here I am!" Like, hey, buddy, it's Saturday, you're not going to school. "What?!" He would just be traumatized.

But that he still needed a day every once in a while to "recoup":

I noticed about every month, he needs just a day. That's all. Once in a while I'll give him a day. I'll call him in sick, not because he's sick, just because he needs a day. And I can just tell with him. He will be tired, irritable. But not, like, tired. He'll just be, overwhelmed? So, I'll just say, I think it's a good mental health day, and he'll say, "Yeah." And I'll give him the day off.

SPIRITUAL DEVELOPMENT

Specific changes observed by teachers in students enrolled in FTK or PTK programs included an increased awareness of the need to respect others as well as increased sharing and cooperation. When asked specifically about the role of spirituality in learning, teachers in Saskatoon Catholic and Onion Lake first described the spiritual activities they practiced in their classrooms, before relating spirituality to general social skills they would like their children to gain. For the most part, in both locations teachers believed children's spiritual lessons could be incorporated into all aspects of their learning. There was substantial variation in terms of the approaches teachers (and one would presume schools) used to implement spiritually-oriented curriculum in their classrooms. Many teachers felt it important to emphasize moral values and ethical learnings behind the stories they read in class. Examples of such are respect and cooperation. In many cases, spirituality was viewed as "being a good person," and learning to share with and respect

others. These lessons were often incorporated into, and sometimes the focus of, large and small group activities.

Parents were articulate about spiritual dimensions of their children's learning as well. They mentioned activities such as prayer, mass, round dances, smudging, and other similar activities as ways of practicing a spiritual dimension within a school setting. Some parents spoke of their children attending mass in other locations or priests coming to the school, while others spoke of their children taking part in round dances during pow-wows. Some parents felt that it was important that their children learn these things in class, not just as an outing or only on a special occasion. One parent shared her feelings regarding the teachings of Cree culture in class saying,

They should know how to behave at a feast, they should know how to behave at a sweat, they should know how to behave around elders, they should know how to behave when there's sweetgrass involved, because there's accepted behaviour, and unaccepted behaviour that the elders expect of the kids.

Many, but not all, parents from Onion Lake and Saskatoon Catholic also felt that teaching spirituality in school was important, even if they personally (and their children) practiced other faiths or no faith at all. For example, several parents said that although they were not practicing a faith, they felt it was important for their children to be exposed to religious beliefs and to develop a faith. As one PTK parent explained:

I always thought that it's important for the kids to have a religious base and then once they get to be adults, or teenagers, they can decide where they want to take their religious upbringing from there.

As well, many parents felt that it was an opportunity for their children to learn about differences and to respect and understand those who do not necessarily share the same beliefs as themselves or their families. One FTK parent described it this way:

There's a whole history of spirituality, and of how people were brought up religiously because of where, and which school you were placed in, whether you were in an Anglican residential school, or a Roman Catholic one. Or if you were brought up traditionally. And I think people, still to this day even, for myself as a young mom, I'm still trying to balance trying to teach them that it's okay to understand that we all have one Creator, one God, and to respect everyone. And I see that in the classroom and when we ask them for story time, and they tell us about what they do during certain holidays, they're all learning from each other about how to respect each other.

KEY FINDINGS

Following are the key findings presented in this section:

- *Physical Outcomes* - Although in one school division PTK students had higher physical development scores than their FTK peers, the type of program was not generally the most important factor in predicting these outcomes. Instead, variables such as student's age (children born later in the birth year for example) and being designated as having special problems were significant correlates of physical health and wellbeing.
- *Socio-Emotional Outcomes* - There was no difference between children in FTK and PTK programs in terms of developing social skills. However, FTK students were observed to show more problem behaviours than their PTK peers. However, this result could be due to the longer time FTK students spend in the classroom, compared to their PTK counterparts, increasing the likelihood of being noted for behaviour problems if indeed this was the case. It should also be noted that in some school divisions FTK programming was implemented as a response to perceived or observed behavioural issues amongst some children. It is not surprising then to observe that FTK students in such school divisions would show higher likelihood of behaviour problems.
- *Intellectual Outcomes* - The findings with respect to intellectual development were mixed. In Saskatoon Catholic Schools, FTK students scored higher on the Alphabet subscale of the early literacy instrument, compared to PTK students, showing that FTK students were more likely to achieve a standard in alphabet recognition and use that is higher than what would be expected for kindergarten and age. On the other hand, Living Sky FTK students scored lower than what would be expected for kindergarten level and age on the same subscale.

Key findings by participating school division include:

Onion Lake

- Students who were older and had no special problems were more likely to report higher scores in physical health and wellbeing. There was no difference between students enrolled in Cree or non-Cree (English) immersion programs in terms of their performance in physical health and development.
- On average, Cree immersion children scored higher in problem behaviours than their non-Cree (English) immersion counterparts.
- The TERA-3 was not designed for use in Cree Immersion classrooms. It is no surprise then that TERA-3 showed non-Cree (English) immersion students scoring higher on the assessment than their Cree Immersion peers.

- There was a general consensus that regardless of how spirituality was incorporated and practiced in the curriculum or as part of extra-curriculum, the key message delivered was to learn mutual respect, tolerance, and a developing sense of cultural and personal identity in children.

Living Sky

- There was no difference between students in FTK and PTK programs in terms of their success in achieving physical health and development. However, female students, those who had a greater number of special skills and/or fewer special problems scored higher on physical health and wellbeing.
- There was no significant difference between FTK and PTK students in terms of positive social skills. FTK students scored higher than PTK students on the problem behaviours subscale.
- On the alphabet subscale of the TERA3, FTK students scored primarily at the less than expected and higher than expected ranges. Their PTK counterparts, on the other hand, were clustered in the grade and age equivalent and higher than expected ranges. Conventions of print and meaning subscales showed no difference between the two programs.
- There was a general consensus that regardless of how the message was delivered, the student outcome of the spiritual element of the kindergarten curriculum, where applicable, was mutual respect and tolerance, and in learning to how to become a “good person.”

Saskatoon Catholic

- There was a significant difference between FTK and PTK students in terms of physical health and wellbeing scores—PTK students tended to fair better than FTK students. Furthermore, independent of this difference, younger students and non-Aboriginal students tended to score significantly higher in the physical health measure.
- There was no significant difference between FTK and PTK students in terms of positive social skills. FTK students, however, scored higher than PTK students on the problem behaviours subscale.
- FTK students scored slightly higher than PTK students on the Alphabet scores in TERA-3 instrument. No significant differences between the two groups were found for the Conventions and Meaning subscales for TERA-3.
- There was a general consensus that regardless of how the message was delivered, the student outcome of the spiritual element of the kindergarten curriculum, where applicable, was mutual respect and tolerance, and in learning to how to become a “good person.”

CHAPTER 5:

EVALUATION FINDINGS - BEYOND STUDENT OUTCOMES

This chapter highlights parents' accolades and concerns regarding the FTK program not directly related to student outcomes. Their insights serve to further develop an understanding of the context within which children learn and develop. Who benefits from FTK programming and the advantages and disadvantages of FTK are also discussed.

PARENT FEEDBACK

Bullying

Parents in both programs were deeply concerned about bullying. They encouraged the schools to implement, or where these programs exist, to maintain, anti-bullying programs. Parents' concern of bullying prevention was not necessarily tied to their children having experienced bullying in the past. The concern about bullying was based on its distinct possibility and on parents' wish to see their children learn how to cope with being victims of bullying or preventing being a perpetrator of bullying. Some parents, however, recounted incidents in which their children had been bullied, and the bullying ending only due to teacher or teacher-parent intervention. One parent, for example, connected bullying with the need for a kindergartner to leave the classroom for an unsupervised destination such as the washroom to be safe—a coping mechanism that was seen, correctly, by the parent to be unacceptable.

Convenience

All FTK parents, as well as some PTK parents, reported that the kindergarten programs that their children attend fit very well with their lives and schedules. Several PTK parents, however, mentioned that the PTK schedule was sometimes “a hassle.” Other parents, both PTK and FTK, asserted that the overall well-being of their children was more important than whether or not a specific kindergarten programming fit very well with their lives and schedules. They said they would “make it work” either way, depending on what was best for their child.

Extra help

FTK parents clearly appreciated the extra support that was possible from the teacher or from other students when a child was in the classroom for the entire school day. They stated that this extra attention not only helped solidify what children were already learning, but helped identify children who needed assistance much earlier. As one FTK parent said,

If they're struggling with something, then they get that extra help in the afternoon to work on, to bring them up to where the rest of the class is.

Parent “readiness”¹

Understanding parents' views and perceptions about having their children attend kindergarten full time has been largely neglected in the literature. Since kindergarten attendance signifies a milestone for both the children and the parents, it is crucial to understand what effects children's attendance in kindergarten would have on their parents. As one parent described her feelings when her child first started FTK:

It scared me because I wasn't going to see him all day. And it was a decision I ended up having to make and something I made with the school, right on the spot. And after about a week or two, I was kicking myself, thinking I don't have my baby home with me. You know, the first couple of days of school, I was like, “How is he doing?” I was getting antsy. I was getting worried. Well, it was something I didn't have to worry about because he was coming home more eager to go to school every day. He was all right. He was OK.

Parental choice

FTK or PTK?

The prerogative to choose whether or not to place their children in a FTK or PTK program was an extremely important point raised by the parents. A few FTK parents were advocating that FTK programs should be mandatory for all children. Most parents, however, were more measured in their judgment, preferring to state that children have varying abilities to adapt to a formal learning environment for the first time in their lives, and that they live in varying social circumstances, and therefore are appropriate candidates for either the FTK or PTK program options. Those parents who were advocating that FTK should be mandatory for all children, nonetheless, were quick to qualify their responses, typically in this manner:

Well, I think it should be mandatory, but it has to be done right. And I don't really know—and that's sad to say as a parent—what exactly goes on in a day in the classroom, but there should be a lot of interacting, there should be a lot of fun playtime, which is learning, without realizing in fact that they're learning.

One PTK parent also felt that FTK should be mandatory, but stressed that “the right teacher” should be in place and that appropriate resources need to be allocated to the program.

¹ Please refer to page 4 for a discussion of the term “parent readiness.”

FTK teachers also felt that FTK should be voluntary and that parents should have the choice to enrol their children if they feel their child is ready, saying:

The full day kindergarten program, I think it's beneficial in some ways. I think it should be voluntary...not mandatory. If the parents think their children are ready, then go for it. But if they're not ready, then don't force them. Because ... kids don't have any say in anything, really. And when you push the child to go to school, if you force them to go, they won't like school.

The following two suggestions were specifically made by a number of parents and teachers related to the choice of FTK or PTK: (1) to provide a transition period at the beginning of the year when children attend half days before easing into a FTK schedule—parents would be invited to come to help ease the transition if necessary; and (2) to shorten the school year because children often lose their focus towards the end of the year as the seasons change and the weather gets warmer and days get longer.

Almost all parents who were interviewed felt that they should have options to put their children into either an FTK or PTK program because the children possess, even at that early age, a broad range of ability and “readiness” to adapt to a formal learning environment, whether this be due to different rates of social and physical development, home environment, or differential quality and approach of pre-kindergarten and day care programs. These findings have many implications for early childhood education and care policy development. As one FTK parent said,

I think if we want to focus on more of a FTK, then we need to really focus on that opportunity for the pre-k² program to maybe expand.

This is also reflected in the following exchange between the interviewer and two FTK parents who were responding to the question, “Who would benefit from FTK?”

First Parent: For those kids who have never gone to pre-school, they haven't had the opportunity to develop the social skills or the interaction abilities ... if they had the pre-school then they've had the time to interact and get accustomed to what a school is about and get involved with it. Then, I don't see any issues with them going to full time kindergarten. I think where the issue lies is with the children who haven't had the opportunity for pre-schooling to adapt or be away from the parents. All of a sudden you put them in five days, full days, and, that could be lots to start off with.

² “Pre-k” refers to pre-kindergarten. This is the form in which the term was originally used in interviews and focus groups.

Interviewer: [to other parent] Do you share the same feeling?

Second Parent: Yep. Especially seeing as there are pre-k children there with fewer intakes and there are not as many of them that are free, so after all the free ones are picked up, well then, the person outside of pre-k, they have to go to the paid ones and not everybody can afford that, you know, so that will put some kids at a disadvantage.

While the above quote indicates some parents' beliefs that if children's behavioural skills are not developed to an adequate level, they will not benefit from kindergarten; other parents believe that those who do not have the behavior skills will need the FTK program the most, to be ready. One FTK parent said:

So I think that by giving them that extra couple hours a day, can only be good, and especially for the kids that don't get pre-k. It can only be good for them. Because, like it or not, there are going to be those kids who come to a PTK who are unprepared as well. This gives the teacher very little time to help them catch up, let alone advance the other ones. I think it gives more balance to the teacher, as far as lesson planning, and everything if they have that much more time. Because then they can say, okay, playtime for you guys. You guys are going to come with me and learn about a really exciting thing called fruits and vegetables. So I think that it's important, especially for the kids that are falling behind.

Due to children's varying levels of development when enrolling into kindergarten, some parents felt that teachers would struggle keeping the more advanced children from becoming bored with class material, while others would require more remedial and prolonged attention to bring them up to rest of the class. Some parents felt that this difficulty for the teacher could be avoided by maintaining a highly structured but individually flexible environment for the children, where advanced students would have extra work, or different work to do, while the other children were doing "their thing." Regardless, many parents advocated for the rights of parents to choose how often to send their child, as well as for flexibility within their chosen program, whether easing into FTK or having the option to pull them out occasionally when they are tired. As two FTK parents said,

I think the option is important, but I think that we need to start off on the casual, for everybody.

I still think parents should have the choice, because some kids won't survive very well in a FTK atmosphere.

The importance of parental autonomy

In addition to parents having a choice of kindergarten programs, many parents (most from FTK programs) felt that parents should be allowed, or even expected, to pull their child out of school for a day if they felt their child needed a break. For example, one FTK parent said,

There's no time like the present to plunge them into full days. But then, I think it needs to be communicated by the program, the teacher, that if these kids are tired and they need a day, they need to take a day.

A difficult choice

There appeared to be some tension between children who attended PTK and FTK in the same school as well as between parents of those children who attended FTK and those who attended PTK. Part-time students were, in some cases, seen as "babies" by those students who attended full-time. FTK and PTK parents also appeared to be divided, though the cause tended to be philosophical differences regarding the purpose of kindergarten. While some viewed it as a social entry into school life (typically a PTK perspective), others saw it as a formal academic learning experience (typically a FTK perspective).

Some PTK parents said they had to constantly remind themselves that they had made the best choice for their child. One PTK parent explained,

I don't know what your results will show, if they will show a difference between the PTK and the FTK. But I have to keep reminding myself that I have two children, both have gone through PTK, and they are doing extremely well at school now, and they're at the top of their classes.

That they felt the need to justify their choice frustrated some PTK parents, and in some cases, they mentioned that they felt stigmatized.

Too much, too soon

Related to the discussion about parental choice, many parents from both FTK and PTK programs were concerned about what they perceived as increasing expectations for achieving academic standards for young children. Many, particularly PTK parents, felt that the length and quality of childhood is diminished by these expectations and for this reason chose not to enroll their children in FTK. One FTK parent explained,

I don't know; I think we're pushing kids to know more than they need to know at this time in their lives. I think it is inevitable, given the technology and the pace of the world. I mean, we've advanced more in the last fifty years than we have in the past thousand.

While some parents had somewhat resigned themselves to what they saw as the encroachment of increasing academic expectations on childhood, the following PTK parents (and others like them) were less accepting of this encroachment:

My biggest thing is let them be a kid while they are a kid [voices in agreement]. I mean, I don't know how else to word it. Because once they start getting into the grades, it's this homework, this project, this paper. I've got to run to the library for this and that. Oh, and I want to join this because my friend is.

Many PTK parents felt that their children had “totally ample” scholastic experience in PTK and that there was no need for them to attend kindergarten full-time. Many were of the opinion that PTK had worked for years and that there was no need to change to a FTK offering. Both PTK and FTK parents felt that “they’ve brought it all down a year” (meaning earlier commencement of the school experience) as voiced by the following parent speaking about the purpose of kindergarten being socialization of children:

“My biggest thing is let them be a kid while they are a kid.”

And then you go into grade one, and you get into all the academics, like literacy and all that kind of stuff. To me, I'm just seeing it being foisted earlier by introducing the FTK. I mean, I know that their brains are like sponges, let's learn more, whatever. It should be a lot more on social skills, I think, than what it seems to be leaning towards.

Several PTK parents were concerned that Canada is competing on an international level with countries such as Japan and China where children are expected to spend evenings and weekends in school to meet and exceed international standards.

I'm very happy that the school went with what they did, giving the parents the option. I think that was very generous of the school divi-

sion, but when this [full-time kindergarten] started coming out last year, about this time, I just thought, I don't want to go down the road that China has, where their kids are away from them at such an early age, and in school. What's the long term vision for where [the school division] wants kindergarten to go, or the schooling system to go? And I just hope that they keep in mind our humanity, and not just the brain function of kids. Because I think that we have the best quality of life on the face of the earth here in Canada. And I think part of that is the childhood that our kids are allowed to experience here. And I don't want them to start stepping it back just so that we can, and are hitting the same marks on some scores compared to other countries. I hope my kids do well. I want them to do well. I want them to excel, but I don't want to push them to the point where they're having ulcers in elementary school, because they're so stressed about school.

Stemming from these parents' beliefs about the sacred and unique nature of childhood in Canada and the primarily social function of kindergarten, many chose to enroll their children in PTK programs. The following is an example of a situation where the child wanted to attend FTK, but, given the opinions stated above, the parent felt it was important to keep them in PTK,

I think he'll be ready [for grade one]. I mean, we've talked about how he's going to be at school full days. And he did say he wanted to go to kindergarten full day, every day. He kept saying that. So it was still our choice that we didn't put him in, because realistically, I don't think he would have been okay. But, it would have been, in a way, even harder for him to go. Just because he wouldn't have had any downtime at all.

TEACHER CONCERNS

PTK and FTK teachers unanimously agreed that parent involvement in their child's education is very important. However, many teachers expressed concerns about children whose parents had minimum contact with the school. These concerns were especially prevalent in relation to parent-teacher interviews and the difficulty many teachers experienced contacting and meeting with all of their students' parents. Expressing these difficulties, one teacher said:

A lot of our parents don't have phones. And don't have any communication with the school at all. And we don't even know if notes go home sometimes.

Some teachers perceived that some parents view kindergarten as "just play." It

is interesting to note that FTK teachers more often reported support from parents than did their PTK counterparts. Whether it was in the classroom or on field trips, parents of FTK children appeared, according to the teachers, to be more involved in the educational process.

WHO BENEFITS FROM FTK?

Teachers felt that the students who benefited most from FTK were children with a developmental lag such as a language delay or who had difficulty playing and interacting with other children.

I had two really strong students come in at the beginning, and they're still strong. But there are other kids who've come almost up to their level. And I'm sure that they wouldn't be there if we wouldn't have them all day. I'm sure they wouldn't. I think it's really benefited those kids who wouldn't have the chance otherwise. Just because we're with them all the time [they are] progressing from anything from lining up without hitting somebody, to knowing their numbers, or colors.

Other teachers, such as the FTK teacher quoted below, were concerned about the challenges some children experience at home and the implications that these have for learning and developing at school. She felt that FTK is particularly beneficial for these children.

"I really think that it needs to be pointed out that if these children get a really good positive start now, you may not see changes in the next three years, but will see it in five years."

These kids will come with a lot of baggage and having them here every day, we are able to help, not say lighten the load, because they still have the baggage, but we can consistently give them the skills between nine and three of how to deal with that baggage, so it's the one constant in their life. They know they're safe here. They know it's going to be controlled, they know they're going to be happy. They know they're going to be fed if they need to be fed, they're going to be clothed if they need to be clothed. Somebody's going to be there to pick them up and put them on their knee and hug them. So it's giving them the consistency that they need, and the safety they need to be able to grow and to learn to deal with all of this baggage that they come with.

Another teacher talked about the possible long term impact of FTK program:

I really think that it needs to be pointed out that if these children get a really good positive start now, you may not see changes in the next three years, but will see it in five years. If these children have a posi-

tive learning experience now, they are going to continue, hopefully, having that positive learning experience. We're going to I hope lose less of them as the time goes on. You're not going to have to deal with the welfare system, and the justice system, and the court system and all the rest of these, trying to educate them when they're thirty-five and have decided they needed to come back. I'm hoping that the FTK in the inner city and in the fringe inner city schools will give the kids that extra step to feel good about themselves.

THE ADVANTAGES AND DISADVANTAGES OF FTK

Part-time kindergarten and full-time kindergarten teachers and parents were quick to list advantages of the FTK program. Some of these are listed below:

- The FTK program better aligns with parents' schedules, especially mothers and fathers who work for pay in or outside of the home. The inconsistency in the schedules of PTK programs is hard to manage and keep track of for parents; if they forget to send their children one day, the children miss out and often feel alienated from their classmates.
- An implication of the FTK program is that parents do not have to find after-school child care for their kindergarten children. This is especially a boon for families who do not have access to affordable and high-quality child care. It also helps low-income families who would otherwise have to find in their budgets a disproportionate amount of money (in relation to their available total resources) to pay for child care.
- The FTK program allows teachers the flexibility of time; there is more time to get everything done throughout the day.
- The FTK children have more time to interact with other children, to develop their social skills, and to learn daily routines.
- FTK teachers have more time to get to know the students, resulting in what they feel is a more comprehensive assessment of the children's progress. This is generally attributed to two factors—fewer children overall (one class of twenty vs. two classes of twenty), and more time spent per day with the children in the FTK program.
- FTK teachers, because they teach fewer children, have more time to get to know their students' parents better.
- The FTK program provides children with the consistency they need to learn to control problem behaviours before they escalate.

- The FTK program is especially beneficial for designated special needs children, as it allows them to have more time with teachers and teaching assistants. It also may allow teachers to more quickly identify student with special needs.

Teachers and parents were able to identify some disadvantages to the FTK program as well. We summarize these points below:

- Children who have rich learning environments at home may find that the PTK program option is better suited to their needs than the full-time program option.
- Some PTK programs are offered half day, every day, and these programs are similar enough to FTK programs that the student outcomes may be comparable to the FTK programs.
- The FTK program does not always allow for “downtime”—e.g. go home at lunch. For some students having some “downtime” is critical in order to participate effectively in the classroom rest of the time.
- Some children may have difficulties adjusting to the FTK program, though adjustment time varies greatly from student to student.
- Some parents hold a philosophical position with which an all-day, everyday kindergarten program is not consistent with. For these parents FTK program is not an option for their children.

All FTK teachers prefer FTK now that they have taught in it; PTK teachers, however, are less certain about their choices, some preferring FTK, and others preferring to stay with the PTK option.

KEY FINDINGS

Following are the key findings presented in this section:

- Parents were very satisfied with their children’s teacher.
- Parents felt strongly that they should be offered a choice between FTK and PTK.
- There were substantial differences in opinion regarding whether FTK was helpful for children, some parents indicating that they felt that FTK was part of a national and international shift towards increasing academic expectations for young children.
- All FTK parents found full-time kindergarten to be convenient.

CHAPTER 6:

DISCUSSION

This chapter presents a summary of the findings of this evaluation. Recommendations for key stakeholders including Saskatchewan Learning and the three school divisions are put forward for consideration.

SUMMARY OF THE FINDINGS

Before summarizing the overall evaluation results, it is important to point out that it was not possible, given that the evaluation began mid-year, to gather data in the first months of the kindergarten year on student development using the assessment tools. Therefore, we were not able to perform pre- and post-tests of student outcomes in children in FTK compared to children in PTK programs. Qualitative data we have gathered suggest that many students entering FTK programs were at or below the developmental levels of their PTK counterparts, illustrated by stories of some children who were not very communicative at all to those who could not solve conflicts without physical violence. Readers are asked to keep this in mind when considering the end-of-year outcomes summarized below.

The classroom and teacher

The physical environment of the classrooms participating in this study were generally conducive for learning, with the space and layout of the classrooms organized in ways such that they promote teacher-student and student-student interactions and learning. In some aspects of the classroom physical environment and resources availability, however, there is room for much improvement. The availability of space and resources within the classroom for promoting gross motor skills development was generally quite low in either type of classroom, but especially so in PTK classrooms. Although the presence of “manipulatives” and materials that promotes early math learning and creativity (through drama and play) were noted in both FTK and PTK classrooms, it appears that the PTK classrooms had a slight edge in presenting these amenities in the classrooms to their students.

Teachers had comparable qualifications between divisions, though PTK teachers had significantly more teaching experience than did their FTK peers. FTK teachers also appear to use a more didactic teaching style than their PTK peers, though this may be related to teaching experience.

Teachers from both programs believed that small group work and teaching assistants were important and helpful, and both used on-going assessment in the classroom to evaluate students’ abilities. FTK teachers felt they got to know their students’ abili-

ties and challenges better than their PTK peers, given the extra time they spent with the children.

Student attendance

Overall, PTK students had higher attendance rates throughout the school year than did FTK students. The attendance rates however changed noticeably depending on the characteristics of students and the school division. Aboriginal students had lower attendance rates than their non-Aboriginal counterparts. Students who were older in their cohort had higher attendance rates if they were in FTK programs, whereas the younger students were better attendees if they were in PTK programs.

Student outcomes

Physical development

Students enrolled in the FTK program in the Saskatoon Catholic schools, compared to students in PTK, were more likely to score higher in physical health and wellbeing domain of the EDI measure. As seen in all other regression analysis, in addition to the FTK/PTK status, and independent of this status, several other student characteristics were significant correlates of physical development outcome in this study.

Some children were tired at the beginning of the year, but both teachers and parents feel this is natural and does not only happen to kindergarten students, but rather to all children, and adults, adjusting to a new schedule and shorter (or in the spring longer) days. Teachers and parents report that all children regardless of the FTK or PTK programs improved their fine motor skills, coloring, manipulating toys and using scissors over the course of the school year.

Socio-emotional development

According to the Teacher-rated SSRS, there is no significant difference between FTK and PTK or Cree and non-Cree (English) immersion on either the positive social skills scale, or the academic competence scale. Cree Immersion and FTK children, however, were observed to have more problem behaviours than their non-Cree immersion and PTK counterparts, as measured by the Teacher-rated SSRS. The differences in problem behaviours between FTK and PTK students held even after accounting for a number of key student-related factors (such as age or gender). These results could be due to the longer time FTK students spend in the classroom, compared to their PTK counterparts, increasing the likelihood of being noted for behaviour problems if indeed this was the case. It should also be noted that in some school divisions FTK programming was implemented as a response to perceived or observed behavioural issues amongst some

children. It is not surprising, then, to observe that FTK students in such school divisions would show higher likelihood of behaviour problems.

It is also critical to mention that special skills, learning problems, and student's age are as likely to be associated with higher scores on the subscales of the teacher-rated SSRS as the type of program (FTK or PTK). This indicates that although FTK programming may help some students more time to develop social competencies, it is not, as supported in the literature review, a panacea for critical social problems that children may face. Students' social backgrounds, family circumstances, gender and age are factors that have far more impact on their learning and development than could one year of FTK programming. The role of schools in positively impacting the lives of children, including learning outcomes, is a critically important issue to be considered not only by schools and those in the educational sector but by society in general.

Intellectual development

According to the early literacy assessment instrument, TERA-3, there are significant differences in overall reading quotients scores between FTK and PTK students in Saskatoon Catholic schools. Further, in Saskatoon Catholic schools, FTK students scored higher on the Alphabet subscale of the early literacy instrument, compared to PTK students, showing that FTK students were more likely to achieve a standard in alphabet recognition and use that is higher than what would be expected for students of kindergarten level and age. On the other hand, Living Sky FTK students scored lower than what would be expected for kindergarten level and age on the same subscale. In Onion Lake, Cree immersion students scored lower on both the overall reading quotient and the subscales, likely due to the fact that this early literacy assessment tool was not developed for use in Cree immersion settings.

"Teachers ... stressed the importance of incorporating various social and play activities into the learning environment."

Teachers from both programs asserted that intellectual development in kindergarten cannot be understood separately from socio-emotional development and they stressed the importance of incorporating various social and play activities into the learning environment. FTK teachers also felt they have more time to individualize instruction for students who need extra help, though they felt this may not be needed in schools or communities where PTK programs are implemented, which tend to have higher SES.

Parents from both programs saw increased knowledge of numbers, letters, and colors in their children, and some mentioned increased inquisitiveness and desire to learn in general. More FTK parents than PTK parents mentioned they saw basic printing and reading skills in their children by the end of the year. Several parents felt this was a natural result of more time spent in class, and less regression of knowledge in between, rather than a deliberate intention to have children reading by the end of the year.

Spiritual development

The general consensus among the teachers and parents of the kindergarten children who participated in this study is that regardless of how spirituality was incorporated and practiced in the curriculum or as part of extra-curriculum, the key message delivered in the classrooms was to learn and show mutual respect to each other and to adults, and to develop a sense of one's cultural and personal identity in children. In other words, becoming a "good person" in addition to being a "good student" was the intention of spiritual dimension in the kindergarten programs.

Parents view on FTK programming

The perspectives and experiences shared by parents of their children's success in FTK and PTK kindergarten programs are critical to better understand the impact of FTK relative to PTK programs. These views provide much helpful detail and add balance to the quantitative assessment of learning and developmental outcomes reported in this document. However as we conversed with the parents it also became apparent that some parents take a very direct and unequivocal position on their view of full-time kindergarten programming. For instance, on a few occasions FTK programming was referred to as "veiled daycare," and part-time kindergarten as having "worked for years and years, no need to change it now," and policy makers as "too concerned about making the parents lives easier." In a sense these types of comments sometimes betrayed a failing to recognize the broader societal context within which educational policy is created. Economic, community, and family contexts in which children live and commence their educational career have changed significantly in the last several decades. The lives of many families continue to be incredibly complicated. Families face many challenges from reconciling work schedules with school schedules (especially difficult for working single-parents) to finding reliable and affordable transportation. In many cases, improving the convenience and accessibility of the program for families has very positive outcomes for children's learning. If parents cannot afford daycare and choose to enroll their child in a kindergarten program with a stable and rich learning environment, this should hardly be cause for judgment.

One theme that resonated through interviews and focus groups with all teachers and parents, regardless of which program they had chosen or supported, was the fact that parent autonomy in enrolling their children in kindergarten programs was sacrosanct. Not only should parents continue to be offered and have the right to choose which program they will enroll their children into, but they should have the flexibility (with no repercussions) to pull their child out of school for the day, if they feel it is necessary.

IMPLICATIONS OF THE FINDINGS

In educational research, the critical role of the teacher in shaping the classroom experience and in turn the measurable learning and development outcomes in students is a well accepted observation. In this study, we set out to understand the role of the teacher and the classroom context as well. Using a previously validated classroom observational instrument, ECCOM, we systematically measured the classroom environment, in terms of the resources and amenities available for promoting specific types of learning, as well as observing the instructional styles of the teachers. We collected data on the teachers' experience in kindergarten teaching and her training background. We have already reported in detail, and then summarized, the findings in relation to the classroom resources and amenities. We now turn to a less enumerable, yet influential aspect of classroom experience and that relates to the pedagogical style and teaching experience of the kindergarten teachers in this study. Studies previously have reported that children who are in classrooms with a primarily constructivist interaction style are more likely to positively rate their abilities, to be more independent and to worry less about school. Our study found that children in PTK programs were in a constructivist environment, more so than their FTK counterparts, and that PTK teachers had more teaching experience than FTK teachers. FTK teachers stated that they probably covered more of the curriculum than the PTK teachers did, although we did not evaluate the accuracy of this perception directly. The FTK teachers were clearly aware however that they had twice as long with their students and may be required to have "more to show" at the end of the year than PTK teachers do. These differences in perceptions and expectations may, in turn, have led to more didactic teaching practices observed in FTK classroom in this study.

Regardless of the program type, parents were uniformly satisfied, and were complimentary about the teachers their children have and expressed nothing but praise for the work they have done with their children. Some teachers on the other hand feel that more parents could be involved in their children education, and that their children would benefit from these types of interactions.

The quantitative findings in this study, although failing to show across the board consistent differences between FTK and PTK students' outcomes in every measure taken, nonetheless revealed some important and useful insights. First, this study found that in some developmental measures taken FTK students showed better outcomes compared to their PTK counterparts. For example, FTK children in one school division showed a clear advantage in early literacy outcome (alphabet recognition and use) than their PTK counterparts. In this school division, FTK students had better scores in alphabet recognition and use than one would expect for their age and grade level.

Second, in the quantitative analysis of data, our comparison group, the PTK students, was very carefully selected in order to maximize the group-level comparability between FTK and PTK students. The selection of comparison groups in evaluative stud-

ies is critical as good comparison groups helps the evaluator to draw more valid (i.e. stringent) conclusions. Although our comparison groups served their purpose well by providing an adequate comparison standard in this study, as mentioned earlier, the study design would have been further strengthened had we been able to add pre- and post-test measures or retrospective (i.e. historical) measures of student outcomes.

Third, we were able to incorporate and use several measures of critical importance to determining student outcomes. For both groups of students, FTK and PTK, included in this study, in addition to the outcomes we had measured, we were able to incorporate student's age, gender, Aboriginal/non-Aboriginal status, special problems, or special skills status in our analysis. Incorporating these additional variables in our analysis enabled us to statistically control for several possible alternative explanations that would otherwise be legitimate explanations for the findings in this study.

Fourth, we have learned that as important as it is to measure any impact of FTK intervention on students' outcomes in the first year of the program (as was the case in schools in Saskatoon Catholic division) we may be far too optimistic to expect to see clear differences between the FTK and PTK students within several months into the program. Some of the outcomes we were measuring, such as social skills, may take far more than several months of intervention to show clear and consistent differences; assuming that the FTK intervention would result in these differences. Related to this point is that in some school divisions, such as Living Sky, FTK programming was introduced at the outset in a setting that had more needs than in an average classroom. The expectation then was that the FTK programming was an appropriate response for a classroom that already had higher needs than that of an average classroom.

"No institutionalization of political will, via policy formation, will uniformly and universally alter everyday experiences of children in an education setting. This is certainly the case with full-time kindergarten."

Fifth, and as a final point, we remind the reader that this study evaluated kindergarten programs that were offered in three different locations that are very different from each other. At one end, we had a relatively large urban-based school division that had fairly distinct approach and philosophical base for learning and teaching, and almost at the opposite end, we had a northern school division, somewhat remotely located, and with a distinct student population and character. These very different contexts in which schools are located and are operated forms a very critical background to the findings reported in this evaluation study. Wells and Oakes (2004) argue that no institutionalization of political will, via policy formation, will uniformly and universally alter everyday experiences of children in an education setting. This is certainly the case with full-time kindergarten, a program implemented in different school divisions to address different, local, and pressing concerns regarding improving learning outcomes for children in kindergarten. While the main feature of the program been evaluated is the same (i.e., full-day, every-day kindergarten offering) in all three school divisions, there are important differences among the school divisions that call us to consider each school division on their own.

RECOMMENDATIONS

The many findings presented in this report have indirect implications for students and their families, and direct implications for teachers, school administrators, school divisions and Saskatchewan Learning. The following recommendations are put forward for consideration.

Teachers

Given that differences were observed in the teaching styles in kindergarten classrooms (didactic and constructivist practices) between FTK and PTK teachers, a dialogue needs to begin between teachers, divisions, and Saskatchewan Learning to address the need for early childhood specialization training for kindergarten teachers. The objective in launching a dialogue might be to open up “space” to discuss what type of approach is taken by the teacher, in the classroom, to help young children transition into school, what type of approach would work with one group of children or another, and when. The intention, however, is not so much to formalize one or another style of teaching for all kindergarten students at all school divisions in the province.

School administrators

Schools need to allocate sufficient resources to ensure classroom space and materials are adequate, up-to-date and accessible for children’s learning needs in all areas of the curriculum (math, language arts, music and arts, physical development). Materials need to be in the classroom, in readily accessible locations, and available for use at any time. Because FTK children attend all day, they require a larger variety of materials and space than do their PTK counterparts.

School division administrators

At the school division level, there needs to be a discussion about the experience and knowledge of early childhood learning of the teachers. While teachers have done a tremendous job, as evident in the parents’ comments during the study, there exists a need to provide opportunities for teachers to specialize in early childhood learning. These opportunities may come in such forms as professional development days, participation in specialized workshops or continuing education courses, and attending conferences.

Both school divisions and policy makers recognize that FTK schools, for the most part, serve high-need communities. Thus, though the scores for FTK may be lower, they could be an improvement over what they may have been without FTK. Change is slow, and it is not unreasonable to expect to run a program for several years before marked progress can be ascertained conclusively.

There also exists a need to provide start up funds or kits for new kindergarten teachers, who have had little to no opportunity to build up a collection of objects that many primary teachers bring with them to their classrooms. These are often real life objects, such as plants or rock collections.

Given that teachers' participation in the FTK study turned out to be a tremendous opportunity for teachers to reflect on their own practice, to share best practices, and to do both in a collective and collegial fashion, there may be benefit in providing this experience on a regular basis for teachers in the future.

A comment heard frequently from families who participated in the study was that parents have the choice to select the program option that best suits their children and family circumstances. This may require significant changes at the division level in terms of changing school boundaries or school catchment areas.

Finally, instead of having "stand-alone" programs to address bullying, schools need to have an integrated program that runs through all school activities.

Policy-makers

There are many findings from this study that have implications for both policy makers and school divisions and that will require work at both levels to make the changes. In collaboration with school division administration, policy makers may want to consider providing start up funding or packages for new kindergarten teachers who have not had the opportunity more experienced teacher may have had to build up a collection of learning materials and props for the classroom. There is also a need to work with the divisions to provide opportunities for teachers to develop early childhood specialties, whether through the degree and training process or as professional development. In response to parent comments during the study, policy makers should also consider offering the choice of FTK or PTK to all kindergarteners' parents. It may then be necessary to remove or change school boundaries or catchment areas, which will involve consultation with school divisions.

Saskatchewan Learning can also work with divisions and schools to provide holistic anti-bullying and spiritual development programs for the schools. There is also a need to focus on kindergarten children's experiential learning that can translate across division boundaries and which will set children up to enjoy learning.

Saskatchewan Learning should take very careful note of the clear differences in outcomes seen between Aboriginal and non-Aboriginal children. How can provincial and divisional policies and schools change to be a place where all children can thrive equally?

There exists a need to provide more consistent funding to replace old, unsafe, or irrelevant toys. This may also include an increased budget to provide additional resources

for FTK classrooms, which require more materials when PTK as the children spend double the time in the classrooms.

Saskatchewan Learning will need to focus on communicating both the academic and social importance of kindergarten, given that parents of these children seem to be split, generally speaking, on the issue. There is also a need to make an early-learning guide available for public use, that will guide parents, teachers, day cares, and preschools in the principles of early learning, and that will provide a foundation for kindergarten experiences. This early learning guide should include physical expectations for children in the kindergarten curriculum, addressing questions regarding acceptable variability in abilities, age appropriate abilities, and general issues of student well-being and how this affect learning.

Parents

Parents need to offer greater commitment and follow through and be fully engaged with their children's kindergarten experience. This may require working with the teacher and other staff, as appropriate.

CONCLUSION

This comprehensive study set out to evaluate the impact of full-time kindergarten programming on students enrolled in three school divisions in 2005-06 in Saskatchewan. The study sought answers to two main questions. Briefly stated, first, we examined whether—and to what degree—full-time kindergarten programming notably increased student achievement in four areas of learning and development (physical, socio-emotional, literacy and language, and spiritual). Second, we wanted to learn about the context in which the kindergarten students were having their first schooling experience. Specifically, we observed the classroom environment of kindergarten programs, including space, organization and resources, teacher backgrounds and instructional style, and we assessed strengths and weaknesses of the programs as identified by two key stakeholders groups, teachers and parents.

First, from analyzing a vast array of student outcome data we learned that full-time kindergartners did better than their part-time counterparts in early literacy achievement (especially in word recognition and use) at least in one school division participating in this study. In other school divisions the results between full-time and part-time kindergartners were either less conclusive or favoured part-time kindergartners. In all three school divisions full-time kindergarten students were reported to have more behaviours problems than their part-time counterparts. While these quantitative results held even after accounting for several other possible explanatory factors, caution should be exercised in drawing conclusive causal effects due to full-time kindergarten programming.

It is prudent to draw causal associations, if any, after analyzing data collected over several years utilizing a design such as employed in this study. As mentioned, the findings varied significantly from division to division indicating that the effects of full-time programming are context dependent. Factors such as students' age, special designations, and classroom resources may have an equal to or greater impact on student outcomes than the type of program.

The insights drawn from analyzing qualitative and participant observational data were more robust and in fact helped us gain a deeper and sometimes nuanced understanding of the impact of full-time kindergarten programming on students and families. The physical settings of the classrooms involved in this study were generally good places for children to learn, although there was a wide range in the degree of adequacy. Some classrooms were well-resourced, physically well set-up while others fell below the norm. Teachers reported that they believed much learning occurs in play-base experiences, underscoring the importance of the quality of the physical space in the classrooms and the resources and amenities available within them. Parents were uniformly satisfied with the dedication, patience and skill demonstrated by the kindergarten teachers.

Many parents were unequivocal about the benefits of the full-time kindergarten program, especially helping students with the transition to school, acquiring skills relating to positive social behaviour in the classroom, and in providing a predictable, convenient schedule for both children and parents. Some parents, however, appear to have a different philosophical stance in having children participate in any extended school-based experience outside of limited, controlled time in classroom. One theme that emerged, regardless of which program that the parents had chosen or supported, was that parents' wish to retain choice in enrolling their children in kindergarten programs. Parents were unequivocal in maintaining that not only they should continue to be offered a choice as to which program they may enroll their children into, but they should have the flexibility (with no repercussions) to pull their child out of school for the day, if they feel it is beneficial and necessary for the child.

As this study has shown, there are many realized and potential benefits to students and families in having children attend full-day, everyday kindergarten programs. As with the introduction of any new programs, there is excitement and expectations of what benefits a new program might deliver, as well as apprehension and even rejection of the program among others. The time is upon us to offer and institutionalize full-time kindergarten programming in all schools, not simply because it has either proven its benefits or it has unrealized potential to benefit students, but because it is a clear manifestation of society collectively taking a greater responsibility to help our young children have the best start in school. It is how we give credence to the often heard adage: *it takes a village to raise a child!*

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Appendix A. Examples of Reliability of Chosen Assessments.

EDI

Reliability test conducted using Full Time Kindergarten in Saskatchewan 2005-2006 date.

As a test of reliability, the internal consistency (Cronbach alpha) of each of the five EDI scales was assessed (see **Table 24**). Two additional summary measures (number of special skills, and number of problems) were also evaluated. The internal consistency measures how well a collection of individual test items is summarized by each EDI domain. The internal consistency is very high for each of the EDI subscales (**Table 10**), indicating that the combined scale items are appropriately indicative of the domains.

The sets of items measuring Special Skills and Special Problems captures these dimensions less thoroughly, however, indicating that the items comprising these two dimensions may be analyzed individually rather than as a summary score.

Table 24. Reliability Analysis Results for the EDI.

Scale Name	Items (# items)	Cronbach's Alpha (N)
Physical health and well-being	A2 to A13, C58 (13 items)	85.4% (n=267)
Social competence	C1 to C25, C27 (26 items)	95.8% (275)
Emotional maturity	C28 to C57 (30 items)	93.9% (261)
Language and cognitive development	B8 to B33 (26 items)	92.2% (287)
Communication skills and general knowledge	B1 to B7, B41, C26 (9 items)*	94.2% (286)
Special skills	B34 to B40 (7 items)	68.7% (280)
Special problems	D1 to D9 (9 items)	31.9% (115)**

*B41 missing in dataset

**most of these items missing in dataset

SSRS

See: Bain, S., & Pelletier, K.A. (1999). Social and behavioural differences among African American preschool sample. *Psychology in the Schools*, 36(3), 1999 for details on reliability and validity.

TERA-3

See: Haney, M. & Hill, J. (2004). Relationships between parent-teaching activities and emergent literacy in preschool children. *Early Child Development and Care*, 174(3), pp. 215-228 for details on reliability and validity.

ECCOM

See: EJ347802 - *The Reliability and Validity of the Early Childhood Classroom Observation Scale for Accrediting Early Childhood Programs*. See also: EJ697865 - *The Early Childhood Classroom Observation Measure*

Appendix B. Semi-structured Interview and Focus Group Guide for Parents.

Note: FTK= Full Time Kindergarten; PTK is Part Time Kindergarten;
K=Kindergarten

Student Related

Did your child attend a pre-school? For how long? Where?

Is your child comfortable spending time away from home, or other familiar environments? Were they when they began the program?

Is your child comfortable with being around people they don't know? Were they at the beginning of the year?

How many transitions do you feel your child has to make during a regular school day? (ie. from home to school, from school to day care, from day care to home, etc.)

How well would you say your child has adjusted to their K program? (how long did it take/ difficult?)

Have you had other children go through a kindergarten program (whether full time or part time)? If so, how many? Have you noticed a difference? If so, can you tell me more about this?

Why did you choose this K?

Do you feel your child/ren get a better education/better care at K than they would in day care? Is there skills or abilities that your child has gained at K that they would not have gotten at home?/at childcare?

Comment.

Has your child benefited from his/her kindergarten program? Do you think your child is benefiting socially from the K programs? Intellectually? Behaviour?

Are you encouraged by your child's teacher to encourage X to read or to do school work with X at home? (NOTE: Find out before hand if the parent has an education/can read!)

What do you think are qualities your child should have going into K/Grade 1**

Do you feel your child is better prepared to enter first grade than they were before the attended the K program? If so, in what ways? In not, why not?

Is there anything about this program that really stands out to you? Can you tell me a story that you think of when you think of this new program? (Good or not so good).

How convenient is your child's K program for you? (is it difficult to make sure they get to school on time? Does it take a long time to get them there? Transportation? Do you always have available transportation to get them there? Do you have a set schedule?

Parent Related

How comfortable do you feel going to your child's school for interviews?/for special events?/just to see what is happening?

Have you ever been invited by your child's teacher to participate in classroom activities?/school events or activities?

Have you ever participated in classroom activities?/school events or activities If so, how often? What do you do/how do you help?/What has the experience been like?

If not, why not? What have been barriers to doing so?

How often would you say you have spoken to the K teacher in the past week? Year? Expand on this?

Have you received feedback on your child's activities and progress throughout the year? Tell me about this.

Have you participated in school events that aren't simply for the Kindergarten children? (Ex. Round dances, Special trips, etc.)

Overall

Do you think Part time kindergarten should be voluntary? Do you think FTK should be voluntary?

Do you think your CS K is different than other K? If so, what makes it different?

In general/overall, are you satisfied with your child's K program? PLEASE COMMENT Why?

What are some positive things about the K program? (List what you like about you child's K program?

What are some things you would like to see changed?

Would you recommend you child's K program to friends with eligible children?

What changes would you like to see made to the program? Recommendations?

Appendix C. Semi-structured Interview and Focus Group Guide for Teachers.

How much opportunity would you say the children have to play? Do you think play is important in the Kindergarten classroom? In what ways?

How much time do students spend at their desk per day?/in small groups?/in individual and child-directed activities/in large group activities?

How flexible would you consider the learning environment in this class? (certain students vs. all students?)

To what extent do students have the opportunity to choose the activities they engage in?

Likert scale - How individualized do you feel the learning programs is for students in your class? (certain students/all students?)

How often does individual interaction take place between you and your students?

How often does small group interaction take place *between you and your students*?

How often does large group interaction take place *between you and your students*?

What is the relative ratio of transition time to learning time in your classes. (ie. for every hour teaching, you spend 10 minutes in transition)

To what extent do you feel you have enough physical space to meet the instructional needs of your class?/the play/free-time needs of your class?

To what extent do you feel you have enough materials (**Tables**, computers, books, toys) to meet the instructional needs of your class?/the play/free-time needs of your class?

Do you ever feel rushed in accomplishing your daily objectives?

How much time per day/per week do you spend assessing individual students

How much time per day/per week do you spend individualizing instruction to particular students needs?

Do you feel you have enough time in your K program to assess each child properly?/to collect and examine student's work/portfolios?

Do you have enough time to individualize instruction for particular students?

Do you feel you have enough time in your K program to keep classroom records?

Do you feel you have enough time in your K program to do your curriculum planning/incorporate more thematic units/offer in-depth coverage of each unit?

How much time do you spend (daily/weekly) with parents of students in your classes.

Of all the parents of your students, what percentage would you say are in the classroom/helping out in the classroom/do you speak with (in or out of classroom) in a week.?

To what extent do you feel your K program allows you to meet and get to know your students parents?

What do you feel is the parental or caregiver's role in their child's learning?

How often do you give parents feedback about their child's progress/activities in K?
Tell me about this? Forms of feedback. Frequency etc.

How many students in your classroom?

How many attend every day on average?

Do you work with another teacher full time/part time?

Do you work with a teaching assistant full time/part time?

Do you ever have parent volunteers in your classroom? If yes, on average how often?

On average then, how many adults are there in the room at any given time? What are the roles these adults play?

Do the students in your class share the cafeteria/playground/school bus with older children? Are they supervised? What are the disadvantages and advantages of each?

Do you think your children feel like they are part of the school community?

Does your K program teach children skills/abilities that they would not learn at home/day care? If so, what are these?

How much have you seen the students in your class benefit from their kindergarten program? Comments ... (some more than others?, their thoughts on this)

Were your students comfortable being with other children they didn't know at the beginning of the year? How about now?

Overall, how well would you say the children in your classroom have adjusted to K?

Do you feel your K curriculum is appropriate for your students' needs? If no, how could it be improved?

Do you think FT Kindergarten should be voluntary? Why or why not?

How much time do students spend at their desk per day?/in small groups?/in individual and child-directed activities/in large group activities?

What are your students' favorite activities, in general? Least favorite?

How often would you say children in your K program are frustrated/feeling stressful?
(in regards to time to be flexible and focus on one things fully)

Do you have “at-risk” students in your K classroom? Would you say they have enough
time for completion of projects?/for socialization with other children?

Do you have advanced children in your K classroom? Would you say they have enough
time to complete long-term projects?

Do you feel your K program is developmentally appropriate for your students? Ex-
plain.

What do you think are qualities your child should have gong in to K/Grade1?

If they have taught PTK. If yes, what do they see as advantages and disadvantages
of teaching FTK?

Differences in time use?

Is there anything the questionnaire hasn’t covered, but they think it is important for
the researchers to know about FTK.

Appendix D. Description of and How to Read Linear Regression Tables.

What is linear regression?

Linear regression is a statistical method used to identify relationships between variables of interest and the observed outcome. Linear regression is used when the outcome is continuous, rendering the equation linear ($y=mx+b$).

How does regression work?

When conducting regression analysis, B, t, and significance values may be interpreted as follows. Consider the social development output (EDI **Table X.x**) for Onion Lake. The following linear regression equation may be considered:

Social Development Score = $9.395 - 0.11(\text{gender}) - 0.905(\text{age category}) + 0.522(\text{immersion status}) + 1.35(\text{special needs status}) + 0.243(\text{number special skills}) - 0.996(\text{number special problems})$

In this equation, the development score is a continuous outcome (linear regression) and each independent variable is preceded by a B coefficient. For gender=1 (female), the development score is reduced by 0.11 points (the B coefficient being -0.11). When gender=2 (male), the development score is reduced by twice the coefficient ($2 \times 0.11 = 0.22$). Given we have values for each of the independent variables, the social development score may thus be predicted.

T-statistics are derived from the relationships between the independent and dependent variables and their corresponding significance values are calculated. Those variables with $p < 0.05$ are significant predictors of the observed outcome.

Reading regression Tables: How do I know what group is being represented?

In each variable indicated below the reference or comparison group is coded as “2”.

Gender: Female is reference group (1 = male compared to 2 = female)

Age Category: younger is reference group (1 = older compared to 2 = younger)

Cree Immersion: non-Cree is reference group (1 = Cree compared to 2 = non-Cree (English))

FTK/PTK: PTK is reference group (1 = FTK compared to 2 = PTK)

Special needs status: Some special needs is reference group (1 = no special needs compared to 2 = some special needs)

Aboriginal status: non-Aboriginal is reference category (1 = Aboriginal compared to 2 = non-Aboriginal)

Appendix E. Assessing Classroom Environment Using ECCOM.

Illustrative Photos From a Low-Scoring Classroom







Illustrative Photos From a High-Scoring Classroom









