Out of School Play of Grade One Students:

Child and Parent Perceptions and Their Relation to Academic Outcomes

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ABSTRACT

Out of school Play and Creativity, Cognitive, Social, and Emotional Development in Grade One Students

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It is frequently claimed that play is crucial to young children's development (Bredekamp & Copple, 1997; Ginsburg, 2007; Runco, 1996; Tsao, 2002) and that how children spend their out of school time has a significant impact on their social and academic achievement at school (Hofferth & Jankuniene, 2001; Miller, O'Connor & Sirignano, 1995). However very little research has been conducted on the out of school play activities of five- to eight-year-olds, and on whether these activities are related to developmental outcomes. This mixed methods study examined children's play outside of school; their academic, social, emotional, and creativity outcomes in school; and parent and child beliefs about play at this age level. Sixty-nine children attending public schools in the suburban regions outside of Montreal, and their parents and teachers, participated in the study. Findings indicated that children spent between one and two hours playing after school each day, and that the most common form of play was active physical play. The most common social arrangement during play was play with siblings. Free time in the morning and total choice in the afternoon, watching others play, and play with commercial toys were predictive of report card grades, behaviour scores, and creativity scores. Parents reported valuing play at this age level, but restricting certain activities, while encouraging others. Children reported enjoying many types of play, and play partners, including play with their pets.

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DEDICATION

To Ariella and Noah, my favourite playmates.

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CHAPTER 1 - INTRODUCTION

Statement of the problem

It is frequently claimed that how students spend their non-school hours has an impact on their social and academic development (Hofferth & Jankuniene, 2001; Miller, O'Connor & Sirignano, 1995). Although research has been conducted on what children do outside of school (see Ben-Arieh & Ofir, 2002; Larson & Verma, 1999; for an overview), very few studies have examined the relationship between different out of school activities and child outcomes (Hofferth & Sandberg, 2001; McHale, Crouter, & Tucker, 2001; Tudge, Tammeveski, Meltsas, Kulakova & Snezhkova, 2001).

There is a body of literature that addresses the effects of structured activities (i.e., sports activities, music lessons, boy scouts) (e.g., Eccles, Barber, Stone & Hunt, 2003; Mahoney, Parente & Lorde, 2007; Posner & Vandell, 1999), reading at home (e.g., Van Steensel, 2006; Weigel, Martin, & Bennett, 2006), and media use (e.g., Ennemoser & Schneider, 2007; Wright, Huston, Murphy, St. Peters, Pinon, Scantlin & Kotler, 2001) on children's academic achievement. However, unstructured play is the activity young children most frequently engage in when they have control over their time (Hofferth & Sandberg, 2001; Lareau, 2000; Tudge et al, 2001). Play has been linked to cognitive, social, and emotional development, as well as creativity, in early childhood (e.g., Bredekamp & Copple, 1997; Ginsburg, 2007; Runco, 1996; Tsao, 2002). Yet, there is very little research that examines the relationship between children's unstructured play outside of school (in homes, outdoors, in after-school

care) and children's academic or social outcomes (Fantuzzo & McWayne, 2002; Fogle & Mendez, 2006; Hofferth & Sandberg, 2001; McHale et al, 2001; Parmar, Harkness & Super, 2000; Rescorla, 1991). In addition, studies that have examined the relationship between time spent in out of school play and children's social and cognitive development fail to clearly differentiate between different forms of play (such as pretend play, active physical play, etc.), or different social arrangements during play (such as playing alone, with peers, with friends, etc.).

Furthermore, preschool and kindergarten programs are often based on the premise of learning through play, but once children begin grade one, the amount of time spent playing in school declines dramatically (Hartmann & Rollett, 1994; Patton & Mercer, 1996; Yeom, 1998).

> "There is no evidence that the positive impact of play on cognition, social skills and the emotional adjustment of children ceases in the early school years. On the contrary, the sudden curtailment of play...hampers creativity and may, in the long run, cause an impaired identity formation." (Hartmann & Rollett, 1994, p. 196)

However, school-age children do not stop playing just because they are not usually permitted to play in the classroom. They play at home, in after-school care, at recess, in the car, while grocery shopping, and in any location where they have control over their use of time (de Lorimier, 1988; Hofferth & Jankuniene, 2001).

The National Association for the Education of Young Children, a U.S. authority on all matters relating to young children, defines early childhood as the period of time between birth and age eight, and asserts that play is fundamental to

child development throughout this period (Bredekamp & Copple, 1997). The Canadian Association for Young Children, a similar Canadian organization, stresses that play is "essential in promoting children's healthy growth, development, and learning" (Canadian Association for Young Children, 2001), and that children between six and twelve years need time, play partners, and appropriate materials and environments for 'quality play' in "home, community, school, and recreational settings" (Canadian Association for Young Children, 2001).

In addition, parental perspectives on play have been researched only at the preschool and kindergarten levels (Farver & Howes,1993; Fogle & Mendez, 2006; Galboda-Liyonage, Scott, & Price, 2003; Haight, Parke, & Black, 1997; Parmar, Harkness, & Super, 2004; Tubbs, Roy, & Burton, 2005), and research on children's perspectives has tended to focus on older children and adolescents, and on out of school time in general, not specifically on play (Ben-Arie & Ofir, 2002; McHale, Crouter, & Tucker, 2001; Newman, Matsopoulos, Chang, & Kao, 2003).

Rationale for the Study

A study investigating participation in various play activities outside of school and the relationship of those activities to measures of children's cognitive, social, and emotional development, and creativity at the early primary level, would contribute to the field of play research. In addition, an investigation into the impact of the social context of out of school play and its relationship to school-based outcomes would also inform research and practice. As well as examining the impact of out of school play on children's development, it is necessary to define the activities, the context (setting, materials, and participants) and the attitudes

surrounding play outside of school. An understanding of parental and child beliefs about play at school age would help to provide a more complete picture of the role of play in children's lives as they transition from kindergarten to grade one.

Purpose

The primary purpose of the present study is to determine whether out of school play predicts grade one children's cognitive, social, emotional or creativity outcomes at the grade one level, for middle class suburban children. Secondary purposes are to describe parental and child beliefs about play at the grade one level, and to explore whether parental and child beliefs explain the amount of time and the types of play children engage in, or the relationship between out of school play and school-based outcomes.

Research Questions

- How do grade one children spend their out of school playtime? What activities do they engage in? With whom do they play? Where do they play?
- Does time spent in unstructured play outside of school predict grade one children's creativity, cognitive, social, or emotional outcomes in school?
- Does time spent playing with parents, friends, siblings, or alone predict any of the outcome variables in school?
- How do parents and children view out of school play at the grade one level?
- Do parent and child beliefs about out of school play explain the relationship between time spent playing outside of school and children's creativity, cognitive, social, and emotional outcomes in school?

CHAPTER 2 - LITERATURE REVIEW

The purpose of this review is to clarify whether play outside of school is linked to social and academic outcomes for school age children, by presenting theory and research related to play and out of school time, with a particular focus on children between five and eight years of age. The review begins by providing a brief overview of play theories and empirical research associating play with particular child outcomes, followed by discussions of play during out of school time and parental and child beliefs about play.

Play and Child Development

Theory

The dominant discourse about play as it relates to learning and development centres around modern constructivist theorists, such as Piaget and Vygotsky. Piaget (1962) linked each of his stages of cognitive development to a particular form of play, which he saw as both driving and reflecting development. According to Piaget, children in the sensorimotor stage (birth to age two) engage in functional exploratory play with objects. In the pre-operational stage (ages two to seven), children engage in symbolic play, including both dramatic (pretend) and constructive (e.g., art activities, building with blocks) play. During the operational stage (ages seven to twelve), children engage in games with rules. Although Piaget's work has been used as a rationale for linking play with cognitive development and learning, and as justification for play-based curricula (Bredekamp & Copple, 1997;

Ginsburg, 2007; Hughes, 1999), Piaget himself viewed play as the consolidation of previously learned physical and mental activities (Hughes, 1999).

Vygotsky (1966), on the other hand, viewed play as a source of development, and as the primary activity of the preschool child. He focused on the use of imagination as a way of fulfilling the child's desires, and challenged the notion that dramatic play and games with rules are two separate entities. Vygotsky believed that imaginative play with rules at the preschool level develops into internal speech, logical memory, and abstract thought at school age, at which point play becomes much less important, and is primarily seen during sport activities.

Bruner (1972) argued that play "is limited in variety, early and short lived, and irreversibly gone by adulthood" (p. 689). He contended that the purpose of play (in children and other primates) is to learn through imitation, and that children learn social rules and conventions through symbolic play.

Psychoanalytic theorists and play therapists, on the other hand, view play as a forum for working through emotions (Bettelheim, 1972; Singer, 1994) and contributing to social and emotional well being (Sluss, 2005). During play, children are able to control situations that are normally beyond their control, and in so doing, experience a range of emotions, and have an opportunity to release more painful or difficult feelings. Bettelheim (1972) also noted that though the importance of play in educating and socializing children has been noted in theory, it has been neglected in practice. He blamed adults for supervising and directing children's play to an extent that they are no longer able to express their own ideas and emotions, and for not participating in children's play as equals. He also blamed modern society, for an

increased separation of the world of children, and their play and games, from the world and play of adults.

Within the fields of education and developmental psychology, Piaget's classification of play into the sequential stages of functional play, dramatic play and games with rules is the most prevalent method used to differentiate different types of play. In fact, Rubin (1977) combined Piaget's stages of cognitive play with Mildred Parten's (1932) social levels of play, and created a matrix for observing young children engaged in different types of play. Parten (1932, in Rubin, 1977) classified play as either solitary, parallel, associative or cooperative. Rubin's matrix is frequently used by researchers and early childhood educators, to describe and assess children's play behaviours (Hughes, 1999; Johnson, Christie, & Yawkey, 1999; Pellegrini & Bjorklund, 1998).

Though widely used and accepted (e.g., Bredekamp & Copple, 1997; Ginsburg, 2007; Hughes, 1999), there are detractors who point to gaps in the constructivist explanation of play. Pellegrini and Bjorklund (1998) argue for the inclusion of rough and tumble play (e.g., wrestling, chasing, super hero play) as a separate play category within this framework. Cannella (1997) critiques the Piagetian stages of play by referring to Heath's (1983) research in rural U.S., in which babies were not given objects to manipulate, but instead were cuddled and held all the time. These babies did not engage in functional play. She also refers to Goodwin's (1990) work with African American children who engaged in verbal play as opposed to play with objects, pointing out that verbal play is also excluded from Piaget's construction of play behaviours.

Post-modern theorists have criticized the idea that children's stages of development are universal, that children play in the same ways across cultures, and that play is a phenomenon that is limited to children. These theorists point out that children's own perspectives about play are not taken into account when theorizing, and have explored issues of power and social control within children's play (Canella, 2002; 1997; Jones, Hodson, & Napier, 2005; King, 1982; Ryan, 2005; Sutton-Smith, 1997). Some of these theorists have looked to play research in other academic disciplines in order to develop a more thorough understanding of the activity itself, as well as its relationship to children and child development.

> Johan Huizinga (1955), a Dutch cultural historian, defined play as a "voluntary activity or occupation executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy and the consciousness that it is 'different" from 'ordinary life.'" (p.28).

Huizinga asserted that play, and the fun it engenders, are the sole purposes of the activity. Roger Caillois (1958), a French sociologist and anthropologist, elaborated upon Huizinga's ideas and classified play as games of competition, games of chance, imitation (make-believe) and dizziness, a category which includes swinging, falling, sliding, spinning and other physical activities which produce a feeling of chaos or vertigo. He then further subdivided each type of play into either improvisational, free form play, or rule-bound, regulated play. Caillois suggested that engaging in competitive or make-believe play allows children to develop their abilities to overcome obstacles and face challenges, "play is like education, without predictable

ends, for the mind, the character or the intelligence" (p. 262). He proposed that games of chance, on the other hand, are a passive habit without links to development, and that dizzy play fulfils a biological function. While he assumed that play may have a role in children's development, he agreed with Huizinga that, "the goal of play/games is the play/game itself" (p.263).

Using these broader definitions of play, Canella (1997), similar to psychoanalytic theorist Bruno Bettelheim (1972), contrasts historical European societies in which play was an important part of adult life, and in which children and adults participated together, with modern notions of play that assume that all children follow predetermined stages of progress, and that create a dichotomy between the notions of play and work. Canella describes how adults attempt to regulate and control play, suppressing activities they deem inappropriate, aggressive or dangerous, and encouraging activities they consider productive, beneficial, or therapeutic. Löfdahl (2005) labels these 'inappropriate' forms of play chaotic, and includes rough and tumble play in this category. She asserts that while some preschools allow chaotic play, others prevent it from occurring. Sutton-Smith (1979) suggests that the notion of play as relating to children's progress and development is but part of the complete picture. He describes issues of power and identity within children's play, particularly focusing on 'illicit' forms of play that children engage in as a form of resistance to adult authority. Similar to Canella, Sutton-Smith stresses the importance of acknowledging the full range of children's play behaviours, not only those activities which support adult notions of progress and development. Jones et al. (2005) explore how play is used as a political tool to

regulate, repress, and normalize young children's behaviour. They trace the development of the notion of play as a fundamental aspect of childhood historically, claiming that mothers were trained to teach children to cooperate, share, and take turns in play. The authors also link Piaget's theory of play and learning with the professional practice of observing play in order to monitor and label children. Ryan (2005) drew on Foucault's poststructuralist theory to study the gendered terrain of choice time in a childcare centre, focusing on how children explore taboo subjects and the blurring of boundaries between play and aggression. She suggests that adults need to actively participate in children's play, and engage in reflection about issues of power in play, together with children.

Although their definitions of play and their critiques of the relationship between play and development vary, these post-modern theorists agree that children's voices and ideas be involved in the construction of new understandings about children's play. Theoretical assumptions about play may have an impact on the design of research being conducted on the relationship between children's play and their development.

Research

Despite the critiques and resistance by more recent theorists to link play and development, research continues to examine the impact of play on development.

Fisher (1992) conducted a meta-analysis on the impact of play on child development. He analyzed 1,171 articles, published between 1974 and 1987, and identified 81 studies in which play was treated as the independent variable. He further reduced this number of studies to 46 by eliminating theoretical articles,

articles that had not been translated into English, unpublished dissertations, and technical manuals published in obscure journals. He identified three interdependent domains in which research on play has been conducted: cognitive development (which includes creative problem solving), linguistic development, and affective-social development. Fisher suggested that this body of literature strongly favoured more structured adult-directed tutoring, or play training, and its implications for educational programming. Thirty-nine percent of the 2,565 participants within all 46 studies were school age (the remainder were preschool age). Fisher suggested that despite the various shortcomings of these studies, "play does result in moderately large to noteworthy improvements in children's development" (p. 168). Further subdivision of calculated effect sizes revealed that play was strongly related to creative imagination and perspective-taking, and less dramatically, to reading readiness and basic language acquisition. Play had only a very slight impact on problem-solving, and questionable impact on affect regulation and Piagetian conservation skill, suggesting that the role of play in reducing anxiety and impulsivity, and promoting operational thought, may not be significant. Fisher then subdivided play into child-oriented play (free play, imaginative play, socio-dramatic play) and adult-directed play (parent play, structured thematic play, play training). The only form of play to have a significant impact on imagination and perspective taking appears to be child-oriented socio-dramatic play (role play in cooperative scenarios).

Unfortunately, there have been no meta-analyses conducted on the topic since 1987. The following section will review and critique some of the research on

play and cognitive development, creativity, social development and emotional development conducted after 1987, or excluded from Fisher's meta-analysis.

Cognitive Development

Although curriculum and policy documents at the preschool level tend to make blanket assertions about play being fundamental to cognitive development (McCain, Mustard, & Shanker, 2007; Ministère de l'emploi, de la solidarité sociale et de la famille, 2004; Quebec Ministry of Education, 2001), both play and cognitive development are concepts which encompass much variation. This review will focus on some of the research relating to aspects of overall cognitive development, language and literacy learning, mathematical concepts and reasoning, and academic achievement in school. This research is most often experimental or quasi-experimental, frequently involving play-based interventions, or play-like situations that may or may not be considered play by the research participants (Fisher, 1992; Sutton-Smith, 1997). There have also been some correlational studies, particularly with regards to assessing the relationship between classroom play activities and academic achievement, and a small number of qualitative studies in naturalistic settings.

Overall cognitive development. Seifert (2006), in a review of research on cognitive development and early childhood education, argues that dramatic play is associated with the ability to read others' intentions, develop social referencing and distinguish between reality and fantasy. Gmitrova and Gmitrov (2003) examined the pretend play of 51 kindergarten students in either teacher-directed whole class

activities or child-directed small group activities in an effort to understand the relationship between those activities and cognitive competence. This was an intervention study and the children in small groups were engaged in teacher-organized play related to a particular theme. The difference between the two treatments was that in the whole-class activity the teacher stood in front of the class and instructed the children in the specific dramatic play activities they are obligated to participate in, while in the child-directed activity the teacher similarly introduced the theme in front of the whole class, but allowed children to play spontaneously in small groups, as she guided, directed and facilitated them. The children's behaviours were observed and coded over 26 sessions. Findings revealed that children displayed more cognitive and affective behaviours while making choices in small groups than during the teacher-directed whole class dramatic play activities. The findings of this study underline the importance of child-initiated activity for cognitive development.

Robert and Heroux (2004) investigated whether participation in visuo-spatial play in early childhood predicted visual-spatial achievement at 9, 12 and 15 years of age. Parents of 158 children and adolescents completed a questionnaire about the child's participation in various visual-spatial play at ages two to four, five to seven, and at the child's present age. Parents' recollections of the children's play were coded along six activity scales, each relating to different areas of cognitive development, and included artistic, building, visual detail and language activities, as well as verbal expression and the playing of seeking games. Parents were also asked to recall which toys their children had access to and enjoyed playing with, and these

were coded as artistic toys, spatial manipulation toys, visual detail toys and language learning toys. The children were then administered standardized tests measuring their visual-spatial abilities, verbal abilities and IQ. The authors found that girls and boys differed in their prior play activities, with boys experiencing more visual-spatial play than girls. They found that earlier experience with visual-spatial play was associated with higher achievement on some of the visual-spatial tests, and lower achievement on the verbal abilities test, while earlier experience in language learning activities was associated with higher vocabulary scores. However, the authors emphasized that there was minimal variance accounted for by previous play experience.

Landazabal, (2005) designed a pro-social creative play program, in an attempt to measure its effect on the intellectual development of 86 ten to eleven year olds in Northern Spain. Participants were compared to a control group of same age peers on verbal intelligence (Kaufman Brief Intelligence Test), nonverbal intelligence (Kaufman Brief Intelligence Test), and verbal associative thinking related to verbal creativity (Word Association Test), before and after participating in weekly two-hour play sessions over the course of the school year. Results suggested that participants in the intervention group had higher scores on verbal intelligence, word knowledge, and on the capacity for verbal associative thinking, as compared to participants in the control group. It is important to note that this intervention involved adult organized and structured activities, as opposed to child-initiated unstructured play.

Language and literacy. Smilansky (1968) conducted sociodramatic play training sessions with "culturally deprived" (p. 86) Israeli nursery and kindergarten children, in an effort to understand the potential of using play to improve children's social and intellectual development. She and her colleagues introduced three themes into the classrooms for three weeks each. The adult play training involved participation in play and intervention from outside the play situation. Results revealed that children's sociodramatic play became more complex as a result of the intervention, in particular, the children became more persistent in their play, and this increase in play complexity was associated with an increase in both verbalization during play (fluency, length of utterance, length of sentence, amount of speech related to play context, and range of vocabulary), as well as socio-emotional adjustment (on Smilanksy's Rating Scale of Adjustment).

In another intervention study, Levy, Schaefer, and Phelps (1986) organized play tutoring sessions and structured socio-dramatic play opportunities for three- to four-year-old "normal preschool children, rather than disadvantaged or handicapped subjects" (p. 139) attending a university preschool. This intervention took place in the dramatic play centre of a preschool setting over a period of three months. The children were administered a vocabulary test (the Peabody Picture Vocabulary Test) before and after the intervention. Findings suggested that the children's vocabulary scores increased beyond what would be expected based on maturation, but only for the male participants. The authors suggested that this was because, prior to the intervention, the boys did not engage in dramatic play, unlike the girls who frequently participated in this type of play. As there was no control

group in this study, it is unclear whether the changes in vocabulary scores were a direct result of the intervention.

Lim (1998) videotaped 56 three- to seven-year-olds in four different Singaporean childcare centres, in which the teachers were explicitly instructed to engage in small group dramatic play in a standardized dramatic play centre within their classrooms, for at least 20 minutes. The data was coded using time sampling and both the Piaget/Parten play matrix and Smilansky's (1990) play categories: imitative role play, make-believe with objects, make-believe with actions and situations, persistence in role play, interactions with others in socio-dramatic play, and verbal communication in the play context. The children were also administered the Peabody Picture Vocabulary Test and their mean length of utterance was calculated from a random sample of utterances on the videotape. The Smilansky play scores correlated positively with both the receptive and expressive language measures, though when the analysis was conducted with the Piaget/Parten play scores, only solitary play correlated positively with expressive language, and solitary play, associative/cooperative play and dramatic play correlated with receptive language scores. These findings indicated that language development is complex and may be related differently to different types of play, since different play activities require varying levels of expressive and receptive language skills.

Another study that observed children's social pretend play examined 48 two- to five-year olds playing in dyads in a laboratory setting (Garvey, 1990). Results indicated that during social pretend play, children used language to make plans,

decided on identities and roles, negotiated conflicts, communicated both verbally and non-verbally, and engaged in meta-communication.

Qualitative studies have also described the naturalistic play of children. For example, Allgeier (1991) observed twenty preschool students engaged in spontaneous block play in naturalistic classroom settings. Qualitative analysis revealed that when literacy props (i.e., books, paper, pencils) were included in the block centre, children spontaneously engaged in literacy-related play. Shroud (1995) conducted similar observations in two preschool settings, and found that the addition of reading and writing supplies to block corners prompted numerous literacy events, such as labelling constructions or pretending to read architectural plans for building projects. Although these studies took place in naturalistic settings and observed children's spontaneous play with familiar peers, the role of the adult in organizing the play experience blurs the line between play and academics, and problematizes the relationship between block play and literacy development. The relationship between children's literacy play and their later literacy skills remains unclear.

Mathematical concepts and reasoning. Although text books, teacher education courses, and popular belief link particular types of play with the development of mathematical reasoning and skills (Bazin, 2001; McCain et al., 2007; Ross, 2004), research linking puzzle play, construction activities, or water and sand play with later mathematical ability or understandings is lacking. Instead, research on play and mathematics focuses on how children spontaneously engage in mathematical conversations or traditional mathematical activities during free play.

In one study, Tudge & Doucet (2004) observed 39 three-year-olds for 18 hours over the course of a week. These authors followed the children from their home, to childcare centres, friends' houses, shops and parks. They used time sampling to record when children were engaged in academic lessons and play with academic objects. The results of this study showed that the children spent almost no time engaged in mathematics lessons, but some time in play involving mathematics (i.e., toys or books that involved numbers and shapes, counting things).

Spontaneous mathematical activity was also studied by Ginsburg, Lin, Ness, and Seo (2003). These researchers observed American and Chinese children during free play periods at child care centres and found examples of spontaneous 'mathematical activity' during play with blocks, Lego and other construction toys. This study investigated whether cultural or SES differences existed in the amount or complexity of 'mathematical activity,' and the authors did not measure whether participation in these activities was linked to future child outcomes or current mathematical understanding or knowledge.

Guberman and his colleagues (Guberman, 1996; Guberman, Rahm & Menk, 1998; Saxe & Guberman, 1998) have conducted research with eight year old girls playing Monopoly, eight to ten year old children playing an educational game involving base-ten blocks in their classrooms, and four to fourteen year old Brazilian children with limited formal education as they used currency to make purchases from local street stands. In general, the research with older children described more than just their participation in particular activities, it analysed their mathematical thinking as they played or engaged in everyday activities. However, the questions

which concerned these researchers, such as how girls change cultural practices, or whether children learn best in mixed-ability or same-ability dyads, did not necessarily focus on the link between play and cognitive development.

This research assumes that engaging in mathematical play experiences would naturally lead to increases in mathematical understanding and would help prepare children for mathematical achievement in school, similar to the assumption that engaging in literacy play will help prepare children to learn to read and write. This assumption is consistent with literature on play and early childhood that describes how educators structure the play environment and facilitate different types of activities, in order to provide opportunities for children to develop their play skills and thus their cognitive skills (i.e., Frost, Wortham & Reifel, 2005; Hughes, 1999; Johnson, Christie & Yawkey, 1999; Sluss, 2005.). However, there have been no systematic studies linking increased time or complexity engaged in these activities, particularly in child-initiated free play, with current or later mathematical understanding or achievement, particularly as children enter school.

Academic achievement. Huffman and Speer (2000) investigated whether the implementation of 'developmentally-appropriate practice,' (DAP) a concept that includes both free play and play-based curriculum, was linked to the academic performance of 225 kindergarten and grade one students attending Head Start programs in the U.S. Each classroom was assessed as either low, or moderate DAP, and the children were tested using a standardized achievement test (Woodcock-Johnson Psycho-Educational Battery-Revised) in the spring and autumn of the school year. The results indicated that achievement was significantly higher in the

more developmentally appropriate classrooms for letter/word identification and applied mathematical problems. It is still unclear, however, whether these 'developmentally-appropriate' classrooms directly influenced the children's achievement.

In another study, Hartmann and Rollett (1994) studied the implementation of a play curriculum in Austrian public elementary schools. This study followed 289 students from grade one to grade four. Half the children were in classes following a play-based curriculum, including four hours weekly of free play in class, as well as play and games used as a teaching strategy to teach academic subjects. The other half of the participants were in control classes that followed the standard Austrian curriculum at the time (which did not include periods of free play in the classroom). The results of this study showed that students in both the treatment and control groups achieved similar results on the General Scholastic Achievement Test for the Third Grade. This result is noteworthy, because children in the treatment group were receiving four fewer hours of academic instruction or work time each week, although it did not imply that play itself increased academic achievement. The authors also found that that children experiencing a play-based curriculum in elementary school were more content and motivated in school.

Finally, Hirsh-Pasek (1991) in her assessment of the relationship between early childhood environments and child outcomes, found that children in more academic (and less playful) preschool and kindergarten environments experienced greater anxiety levels, and more negative attitudes towards school.

Creativity

Creativity is a multi-faceted concept that is often linked to "highly productive individuals capable of contributing insightful and far reaching solutions to our problem-ridden civilization" (Cooper, 1991, p. 194). However, there is no consensus on what creativity is, what constitutes creative thinking, or what a creative individual is like (Cooper, 1991). Children's creativity is different from that of adults, as children's use of their imagination and willingness to try new things will not usually lead to new discoveries or knowledge for society as a whole, but is vital to the individual child's development (Runco, 2006). It has been suggested that children progress through a series of stages as they develop creatively, but that their creative development in various domains can be unrelated (Runco, 2006).

Elementary aged children's creativity has been linked to dramatic play, as well as to artistic and musical activities, mathematical exploration, and playing games with rules in school (Runco, 2006; Sefer, 1995). Creativity has not been linked to academic achievement, but may be related to children's leisure-time activities, that are child-chosen and child-initiated, and require much emotional investment (Runco, 2006). Russ (1998) argues that pretend play is the most important type of play in the development of creativity. She suggested that there are two types of creative processes: cognitive and affective processes. This explains why creativity is sometimes discussed as a subsection within cognitive development (Fisher, 1992). In order to include creative affective processes as well, creativity has been explored in this paper as a separate sphere of development.

Fein (1981), in a review of the research literature on pretend play, stated that there was "surprisingly little evidence of a relation between play and creativity" (p. 1104), although divergent thinking had been linked to pretend play. She cited Dansky (1980) who assessed the effects of dramatic play and exploration training of low-SES American preschoolers' ability to comprehend, recall, and produce meaningful, sequentially organized verbal information, as well as on their creativity. Results revealed that the children in the play training group achieved significant improvements in socio-dramatic activity, imaginativeness, and comprehension and production of sequentially organized information, while those in the free play control group did not improve on any of the 21 dependent measures. Dansky suggested that free play did not benefit children unless they engaged in socio-dramatic play.

Hirsh-Pasek (1991) investigated whether family and school characteristics correlated with children's academic outcomes, creativity and emotional well-being. Ninety four- to five-year-old pre-kindergarten students and their mothers participated in the study. Results indicated that preschool children in more academic, and less playful, environments, tended to score lower on a test of creativity (the Torrence Test of Preschool Creative Thinking) than those in play-based environments.

Similarly, research on the effects of a play-based curriculum in Austrian primary schools indicated that after the new curriculum was introduced, six-year-olds improved their scores on two tests of creativity (divergent thinking test and

ability to generate ideas for activities to do in class when teacher not present) and social collaboration (Hartmann & Rollett, 1994).

Sefer (1995) studied the effects of an adult-directed play-oriented curriculum on the creativity of elementary school students. The curriculum involved drama, group research and various games, and was implemented in two schools in Yugoslavia with seven to eleven year old children, for six weeks each year, over a period of five years. Students were observed in class by observers and evaluators who were not aware of the purpose of the research project. They rated the children's academic and artistic products for imagination, expressiveness, originality, talent and success; their small group and class process for fluency, originality and complexity; and interviewed teachers about the children's creative behaviour in different activities. Results revealed that the experimental class outperformed the control class on all measures of creativity.

Lloyd and Howe (2003) explored the relationship of different forms of solitary play to divergent thinking skills by observing four- and five- year old children's play in childcare centres and then administering the Thinking Creatively in Action and Movement test (Torrence, 1981). The authors found that solitary active play was positively correlated with creativity scores, while reticent behaviour was negatively correlated with the creativity scores.

Howard-Jones, Taylor, and Sutton (2002) experienced the immediate effect of unstructured play on subsequent artistic production among six- and seven-year olds by investigating the differences in the quality of a collage produced after either free play with salt dough or copying text from a board. The results found that the

children who had played prior to the art activity used more colours and more pieces of tissue paper than those who copied text. The authors question whether a more relaxed mental state, increased motivation, or the fact that the children were more awake after playing may account for the findings.

In general, the way that creativity is defined, and the measures used to assess it can vary so much that, while play experiences appear to be associated with child creativity, it is difficult to say which play activities, and which aspects of creativity, are related. Research seems to favour the relationship between dramatic play and creativity. While there is limited research examining the production of visual art, other creative play activities, such as construction activities, and musical play seem to be lacking from research on play and creativity. Furthermore, when an adult-directed intervention is used, the presence and attention of the adult, as well as his/her expectations, can be a confounding variable (Fisher, 1992).

Socio-emotional Competence and School Behaviour

Social competence has defined as effective and appropriate functioning in specific contexts (Pellegrini & Bjorklund, 1998) and as social and communicative skills used to build relationships and succeed in an environment (Cefai, 2004). It involves the ability to adapt to different situations, and to relate to others and behave in age- and situation-appropriate ways (Pellegrini & Bjorklund, 1998). Emotional competence consists of the expression and experience of emotions, regulation of emotions, and knowledge of emotions, and has been linked to positive social and academic outcomes (Denham, 2006). Cefai (2004) identified four key

dimensions of socio-emotional development: effective communication, pro-social attitudes and behaviours, effective problem solving, and autonomy.

Despite the fact that play, particularly in early childhood settings, has traditionally been associated with social adjustment in young children (Bezaire, 2008; Chafel, 1991; Patrick, 1996; Weininger, 1972), there have been few studies linking specific play activities to particular aspects of socio-emotional competence, and most of those have studied preschool age children. Kontos, Burchinal, Howes, Wisseh & Galinsky (2002) studied children's interactions with objects and peers in preschool classrooms. Two hundred and twenty-five four-year-olds participated in the study. Children's interactions with peers were measured as an indicator of social competence (using the Howes Peer Play Scale). Results found that social competence was particularly linked to creative arts activities, pretend play, and the lack of an adult presence during play.

Gagnon and Nagle (2004) studied 85 preschool children considered 'at-risk' for academic difficulties. Ratings of peer interactive play (Penn Interactive Peer Play Scale, 1998) and social-emotional development (Vineland Social Emotional Early Childhood Scale, 1998) were collected from teachers and parents. Significant positive relationships were found between teacher and parent ratings of children's play with their peers and their corresponding observations of social–emotional development. The authors suggested that these findings supported the important role of peer play in the development of social competence.

Elias and Berk (2001) observed 54 three- and four-year-old children in the housekeeping and block centres of their classrooms, engaged in solitary dramatic or

socio-dramatic play. Children's play was coded using the Smilansky Scale (1990), as described above. Self-regulation was observed naturalistically and assessed during circle time and clean up time. Both frequency and persistence of complex socio-dramatic play were associated with the development of self-regulation, as evidenced by the children taking responsibility for cleaning up material after free play. Attentiveness during circle time, another dimension of self-regulation, was not related to play observations.

Pellegrini (1988) studied the rough and tumble play of 94 children in Kindergarten, grade two, and grade four, on the playground at recess. Children also completed a social competence measure (Interpersonal Cognitive Problem Solving, 1979), as well as a sociometric measure to determine how popular or rejected each child was (as perceived by classmates) and teachers completed a questionnaire about anti-social behaviour. Findings revealed a positive association between rough and tumble play at recess and social competence, but only for popular boys.

Colwell and Lindsey (2005) examined the relationship between playing with same- and other-sex peers on social competence. Sixty preschoolers participated in the study. Sociometric interviews were held in order to assess classroom peer acceptance. Teachers completed the Teacher's Checklist of Peer Relationships (1987), a measure of peer social competence. Finally, naturalistic observations of children's play were conducted over a period of four months. Results were complex, but indicated that child sex, and sex of playmate, are important factors in the association between pretend play, rough and tumble play, and social competence. For example, boys who engaged in rough and tumble play with other boys were

better liked by their classmates than boys who engaged in rough and tumble play with girls.

Hartmann and Rollett (1994), in their assessment of the Austrian play curriculum in elementary school, found that children in the play intervention classes scored higher on a teacher rating of social behaviour than the control group. Children who spent time playing in class exhibited more active and cooperative behaviour, and spent less time eating junk food and 'horsing around' on the playground at recess. These findings seem to indicate that the positive effects of play activities for school-age children can transfer from one context to another.

Ahn (2005) observed 12 early childcare teachers discussing emotions with children during free play, as well as other times during the day. She noted the influence of early childhood educators on the development of toddlers' and preschoolers' emotional competence by modelling talking about their own emotions, labelling the children's emotions, discussing emotions during conflict resolution, modelling acceptance of both positive and negative emotions, and helping the child find constructive ways to express their emotions.

Jarrett and colleagues (2001) investigated the impact of recess on the classroom behaviour of 43 students in Grade Four, in a U.S. school where recess has been eliminated. The project introduced recess once a week and then compared the children's behaviour in class for recess and non-recess days. This study found that 60% of the children worked more and/or fidgeted less on days when they were allowed a break in classroom instruction. In this study, particular recess behaviour, such as different types of play, was not measured.

Calabro (2003) also compared two forms of play therapy used with preschoolers with behavioural difficulties using the Social Skills Rating System (1990). Results indicated that both forms of play therapy were effective in promoting greater emotional understanding, decreasing problem behaviours, and increasing pro-social skills in these children.

The use of naturalistic observation of free play in classrooms and on the playground in many of these studies promotes greater confidence in their results. The correlations between parental and teacher reports of children's play behaviours (Fantuzzo & McWayne, 2002; Gagnon & Nagle, 2004), and the transferability of the benefits of play from the classroom to the playground (Hartmann & Rollett, 1994) provide important justification for the study of out of school play and its relationship to outcomes measured in school settings.

Summary

This research indicated that there are relationships between different forms and social arrangements of play and particular child outcomes. However, the research linking social competence with play is much more convincing and methodologically sound than the research examining play and cognitive development, creativity, or emotional development. Although these studies made some links between engaging in specific play behaviours and specific child outcomes, most of the situations were far from realistic or replicable in the everyday lives of most children. They took place most often in classrooms and were usually organized and directed by adults. In fact, very few studies have examined children's unstructured play at home, and these were undertaken at the preschool level

(Fantuzzo & McWayne, 2002; Fogle & Mendez, 2006; Hirsh-Pasek, 1991; Parmar et al, 2004; Tudge & Doucet, 2004).

Criticisms of the view that play is the cause of developmental outcomes suggest that in intervention studies, it is the effect of the relationship between the teacher and the students, and not the play itself, that is responsible for growth in outcomes (Fisher, 1992; Sutton-Smith, 1997). Another suggestion is that children's play is reflective of their stage of cognitive, socio-emotional, or creativity development, and therefore more complex play is the result, not the cause, of such development (Sutton-Smith, 1997). Those studies that involve observing short periods of play, or adult structured play in a laboratory setting, may fail to capture the true meaning of play in the child's life, or to accurately gauge the full extent of the child's capabilities. Placing a child in an unfamiliar setting, being observed by strangers, or being told to participate in an activity the child is unfamiliar with and may not want to participant in, may also induce anxiety and discomfort in the child. Therefore, it seems important to understand how children choose to spend their time, particularly for children in elementary school, where play is rarely a part of their classroom experience.

Out of School Time

Many studies regarding how children spend their time outside of school group children into broad age categories (for example, kindergarten to grade six) and do not necessarily present data for subgroups based on age (Hofferth & Jankuniene, 2001; Lareau, 2000; Larson, 2001). Others focus only on toddlers and preschoolers (Fogle & Mendez, 2006; Galboda-Liyonage et al, 2003; Parmar,

Harkness & Super, 2004; Tudge et al, 2001). Therefore, it is difficult to locate data specifically on children in the early years of elementary school, for whose development it is claimed that play is beneficial (Bredekamp & Copple, 1997; Ginsburg, 2007). Ginsburg (2007), in a report advising American pediatricians of the importance of unstructured play for children of all ages, argues that time for free play has been markedly reduced for some children, because of a hurried lifestyle, changes in family structure, and increased attention to academics and enrichment activities at the expense of recess or free child-centred play. However, research does not support his theory that children no longer spend time playing outside of school.

Play appears to constitute a major part of young children's lives outside of school, both at preschool and school ages. Tudge and his colleagues (Tudge et al, 2001; Tudge et al, 2006) conducted a large-scale longitudinal study, examining the way children spend their time in various cities around the world. They conducted time-sampling observations of videotaped segments of two- to four-year-old children in their homes or wherever they happened to be, for 20 hours over the course of one week. They also interviewed their parents, who - along with teachers - also completed the Social Skills Rating System questionnaire (1990). Their first publication (2001) reported on results from the U.S., Russia, and Estonia, showing that preschool children spent the majority of their time in play (the means were from 80 to 110 play observations over the 20 hours, in the different countries). The children spent considerably less time in all other activities, such as conversations, work, and lessons. The second publication (2006) reported on children's daily time use in the U.S., Brazil, and Kenya, where they again found that children in these

diverse parts of the world spent more time engaged in play than in any other activity (mean amount of time spent in play for the different countries was between 45 and 62 percent of the observations). They also found that children in rural Kenya were more likely to spend time playing with other children rather than their parents, and to play with natural objects or objects which were not intended as toys. They found no differences between the three locations in the amount of time spent in pretend play, although they did find that children attending childcare in Brazil spent more time in pretend play than those not attending childcare in Brazil.

Miller, O'Connor, and Sirignano (1995) conducted a descriptive study of children's time use involving 180 low-income, four-to-seven-year-olds, in three U.S. cities. Interviews conducted with parents involved asking them to name the three activities their children most frequently engaged in after school. The most frequent response was television viewing (mentioned by 59% of participants). However, fantasy play was mentioned by 40% of respondents, 39% mentioned playing with friends or siblings, and playing with academic toys and drawing were included in two separate categories, making it difficult to provide a single number representing the amount of time these children spent playing daily. Despite the obvious weaknesses with the methods used to analyze the data, and the fact that the results were not analyzed separately for pre-school and school-age children, it is clear that play was one of the children's primary activities.

Newman, Matsopoulos, Chang, and Kao (2003) administered a "What I usually do" questionnaire to 90 nine year old children, who provided information about their usual activities Thursday after-school, Friday after-school and Saturday

all day. Children were asked to write the activity that they usually do each hour, as well as whether it was themselves or their parents who chose the activity, and to rate how much they enjoyed it on a five-point scale. Out of a total of 26 hours, children reported that they spent the most time in play (approximately seven and a half hours), almost 20 hours in self-chosen activities (including play), and 20 hours in enjoyable activities (including play).

Hoffeth and Jankuniene (2001) investigated data from the 1997 Child Development supplement to the Panel Study of Income Dynamics (an annual 30-year longitudinal survey of Americans). Children and/or their parents were interviewed and a 24 hour time-diary was created for one day. This study examined the data from the six-hour period after school and before the children went to bed, in an effort to explain where students go and how they are supervised. This study found that the 1,484 five- to twelve-year-old children participating in the study played everywhere they happened to be after school, most commonly at home or in after school care. Fifty-four percent of the children played at home, and the number of hours of play equalled hours spent studying, and was surpassed only by television viewing, as the most common home activity for all children.

Hofferth and Sandberg (2001) examined the same set of data, along with children's scores on four subtests of the Woodcock-Johnson Revised test of Basic Achievement (1989) and the Behavior Problems Index (1986), in order to investigate whether these outcome measures were associated with time spent in particular activities. The authors discovered that the amount of time children spent playing outside of school declined dramatically between the ages of five and six.

According to their analyses, children spent approximately 17.5 hours a week playing outside of school or childcare between the ages of three and five, but only 12 hours playing outside of school between the ages of six to eight. This finding may be explained by the amount of time the children spent in school and daycare: time in school increased from 12 hours a week to 32 hours a week as the children got older, while time in daycare decreased from 7.5 hours to less than 2 hours. The results also supported previous research that suggested that children spend more free time in unstructured activities (four fifths of their free time) than in structured activities. However, this study did not find any relationships between playing or watching television and the academic or behavioural outcomes, although they did find that time spent eating, sleeping, visiting, playing sports, and reading were positively associated with academic and behavioural outcomes. They also found that time spent with family in general was related to fewer behaviour problems, that children in childcare spent less time playing than those who go straight home after school, and that children with a greater number of siblings spent more time playing.

McHale, Crouter, and Tucker (2001) investigated how 198 firstborn ten-year olds (with at least one younger sibling and a two-parent, two-income family) spent their free-time, and whether this was related to their school grades, depression symptoms (Children's Depression Inventory: Kovacs, 1981) and parents' reports of conduct (Strengths and Vulnerabilities Questionnaire, Goodman, 1994). The researchers assessed how much time each child spent in sports, hobbies, playing with toys and games, outdoor play, reading, television viewing, and hanging out. Each family was contacted by phone seven times over the course of two weeks

(twice on weekend evenings and five times on weekday evenings). Parents and children were interviewed about their participation in activities outside of school each time they were called. This data was then related to the outcome measures at the time, as well as two years later, when the children were twelve -years old. The researchers further investigated the social context of the children's activities, by categorizing whether these activities took place with parents, unrelated adults, peers (unsupervised) or alone. They also tested a 'child-effects,' hypothesis, a theory suggesting that children choose their activities based on their personal characteristics. For example, academically talented children will choose reading while children with conduct problems will choose to hang out unsupervised with their peers. Results suggested that children spent more time playing outdoors and engaging in sports and less time watching television in the spring than in the winter. Findings revealed that ten-year olds spent the majority of their free time watching television. Time spent in outdoor play was negatively related to school grades and positively related to conduct problems at both ages. Playing with toys or games revealed no significant correlations with any of the three outcome measures at either of the two ages. When the child's social context was taken into account, findings revealed that time with father and time alone correlated positively with time spent playing with games and toys at age ten, and that time spent playing outdoors was positively correlated with both time spent with mother and time spent unsupervised with peers. Hierarchical regression analyses revealed that for girls, the social context (time with mother or unsupervised with peers) mediated the link between lower school grades and time spent playing outdoors. However, for

boys, social context did not mediate this same link, for them, it was the activity (playing outdoors) and not the social context that predicted lower school grades. Children's outcome scores remained stable from age ten to age twelve, suggesting that activities explained only minimal variance in developmental outcomes for preadolescents. The authors suggested therefore that it is the children's characteristics that predict their activity participation, and not the activities that influence their characteristics. In discussing their results, the authors explain that the term outdoor play actually encompasses a wide variety of activities, and that future research should investigate these particular activities in more depth.

Recent qualitative research has pointed to considerable differences in the lives of children based on the circumstances and particular situations in their lives. Lareau (2000), conducted an ethnography with data from 88 seven-to-ten-year-olds, in an effort to discover how socio-economic status, as well as the intersection of SES with race, shapes the overall contours of different childhoods, the pace and rhythm of life, and the degree of interweaving between parents' and children's lives. She found that middle-class children, both African-American and European-American, led structured, hectic and organized lives that involved tremendous labour and planning on the part of their parents, often being shuttled back and forth by their parents to various extracurricular lessons and activities. By contrast, the lives of working-class children are more informally organized. These children were described as spending time in their neighbourhoods, playing more and waiting (for their parents, for activities to begin, for their playmates to be driven from across town, etc.) less than their middle class counterparts. Similarly, Tomanovic (2004),

conducted a longitudinal mixed methods investigation into how life is structured and constructed for children by their family habitus in post-conflict Serbia. Ninety-three children, ages four to seven, and then 21 of these same children, at ages 11 to 14, were followed. Results revealed that working class children had more time for unstructured play than their middle class peers.

In an international review of literature on out of school time conducted with both children and adolescents, Larson & Verma (1999) suggested that children and youth in North America have more leisure time than youth in Europe or Asia, and that "play, talk, and interactions with family members and friends may be among the most important contexts of learning" (Larson & Verma, 1999, p. 702). However, in an article about the same research review published two years later, Larson (2001) cited McHale et al (2001), as well as Osgood, Wilson, O'Malley, Bachman, and Johnston (1996), who found that, for adolescents, unstructured time with peers was correlated with negative outcomes, such as engaging in anti-social behaviour, skipping school, and acts of vandalism. Larson concluded that the relationship between unstructured play and developmental outcomes was complex, and required further research.

The results of these studies suggested that as children got older, they engaged in less unstructured play, which may be replaced with an increase in homework and television viewing (Hofferth & Jankuniene, 2001; Hofferth & Sandberg, 2001; Larson, 2001; McHale et al, 2001; Miller et al, 1995). However, within almost all of these studies, all types of play were combined into one all-encompassing category, with no differentiation based on particular activities

(except for Tudge et al, 2006, who studied play with academic objects and dramatic play) or social arrangements (with the notable exception of McHale et al, 2001). In addition, although some studies included five to eight year old children, none focused specifically on this age group, and only Hofferth and her colleagues (Hofferth & Jankuniene, 2001; Hofferth & Sandberg, 2001) analyzed their results by age category. Ben-Arie and Ofir (2002), in their review of the literature on children's time use, stressed that much work has been done with adolescents, but that younger children have been neglected in research on children's lives outside of school.

Parental Attitudes Towards Play

Research conducted with preschool-age children has examined play in more detail, and has included parental beliefs about play as a variable when studying how children spend their time at home. Galboda-Liyonage, Scott, and Price (2003) investigated how 31 mothers of preschoolers spent their time, particularly in parent-child joint activities. This study found that parents of preschoolers chose to spend more time with their children in activities they defined as 'educational,' as opposed to activities they defined as 'play,' and that the participants in their study spent more time playing outdoors than indoors.

In a longitudinal ethnography with mothers of toddlers and preschoolers, Tubbs, Roy, and Burton (2005) investigated how 61 urban, low-income, American mothers from various ethnic backgrounds, carved out family time in the midst of economic difficulties. This study was part of a larger study on the impact of welfare on families. Forty different ethnographers met with families who had children between the ages of 18 months to four years, in order to conduct observations,

interviews and 24 hour time diaries, once or twice a month, for 12 to 18 months. Results revealed that only 39% of mothers (24 out of 61) reported playing with their children on a regular basis. The authors did not report how frequently or how much time these mothers spent playing with their children. The mothers described playtimes as unstructured and promoting the children's enjoyment, important for strengthening family relationships, and also as promoting learning, encouraging creativity, and generating development. They reported that they were involved as their children played with bikes, scooters, board games and toys, as well as playing running and chasing games, while the fathers also engaged in rough-housing and wrestling.

Another study on parental play beliefs was conducted by Parmar et al. (2004),who examined the views of 24 Asian-American (from a wide variety of countries) and 24 European-American parents, by having the parents fill out the Education Attitude Scale (Rescorla, 1991), the Preschool Play and Learning Questionnaire (Parmar, 2000), and a Daily Activities Checklist (Parmar, 2000), collecting observations of the child's home environment, and having the teachers complete the Child's Behavior Inventory of Playfulness. Findings revealed that European-American parents valued play for development, while Asian-American parents valued a head-start on academics in preparation for school. Differences in parental play beliefs were related to the amount of toys available at home, the organization of the space at home (in order to facilitate play), and children's use of time at home. European-American parental attitudes and beliefs were also more

similar to teacher attitudes and beliefs than Asian-American parental attitudes and beliefs.

Farver and Howes (1993) investigated mother-child pretend play in 60 families with second-born toddlers in the U.S. and Mexico. These families were videotaped in their homes during daily routines and activities. The mothers and children were then asked to play with a bag of wooden shapes for twenty minutes. Although the researchers made every effort to standardize the procedure so as to be able to isolate a particular variable (joint play), one wonders what effect the researcher direction of the activity had on the mother-child interactions. Nevertheless, no significant differences were found between the two groups in terms of the amount of joint-play that took place. However, the European-American families did engaged in more interactive social play and pretend play than the Mexican families. The mothers were then interviewed using open-ended questions designed to elicit their beliefs about play. Results revealed that the European-American parents believed in the educational value of play, while the Mexican parents viewed play as a source of entertainment and amusement.

In another study, Fogle and Mendez (2006) developed the Parent Play Beliefs Scale, which they validated with 224 African-American mothers of preschoolers attending Head Start in the U.S. Peer play competence was assessed using parent and teacher versions of the Penn Interactive Peer Play Scale, a rating scale that assessed children's play behaviours at home and in their neighbourhood, and that yielded separate scores for play interaction, play disruption and play disconnection. Children's temperaments were assessed using the Temperament Assessment

Battery for Children (Martin, 1988). Results include a positive correlation between maternal ratings of play with children's interactive peer play, as well as parent education. Maternal ratings of academic focus correlated negatively with pro-social peer play ratings and parent education, and correlated positively with ratings of disruptive and disconnected play in children. Parental belief in the value of play for young children was positively associated with their preschool children's social competence.

Mothers' and father's beliefs about and participation in their children's pretend play was also investigated by Haight, Parke, and Black (1997). Twenty-two European American middle class two-parents families of first-born toddlers participated in the study. Children were videotaped at 24, 30, and 36 months, playing for 35 minutes with each parent. Parents were requested to play with their children as they ordinarily would. Mothers and fathers were also interviewed separately at each age. Parents were asked to rank-order pretend play, rough and tumble play and book reading according to their own preferences. They were then asked to rate the developmental significance of each activity to their child, and finally to rate the significance of their own participation in the activity. The authors found that both mothers and fathers defined pretend play as enjoyable and important for children's creativity and cognitive development, although they enjoyed and valued reading even more. The study also revealed associations between parents' beliefs about play and their participation in play. Mothers who rated pretend play as developmentally significant and who believed their participation in play was important, tended to spend more time pretending during

parent–child play. Furthermore, mothers who reported enjoyment of pretend play were better able to facilitate pretending with their child. However, the authors included many activities in their definition of pretend play, "having a tea party, taking care of dolls or stuffed animals, pretending with toy trains, cars, or construction equipment, pretending to be someone else" (p. 275), and, as their study focused on pretend play, omitted other play activities, such as playing at the park, sports, and drawing, in which parents may enjoy participating with their children.

Fantuzzo and McWayne (2002) examined children's play at home and in the classroom. They administered the Penn Interactive Peer Play Scale to 242 parents and teachers of preschoolers. The authors found significant correlations between how children played at home and how they played in the classroom, their attitude to learning, self-regulation, and classroom behaviour. Although this study did not examine which play activities children participated in, it provided empirical evidence for a relationship between preschool children's play at home and their social and emotional competence in the classroom.

Despite the methodological issues inherent in some of these studies, it is clear that parents from different cultures and SES backgrounds vary in terms of the importance and developmental significance they assign to children's play, and that their beliefs were associated with how often, with whom, and which play activities children engaged in at home. However, there is a huge gap in the research regarding school age children's play, the impact of children's out of school activities on their social, emotional, cognitive, and creative development, and parental beliefs about play at this age level.

Children's Perspectives of Play

A limited amount of research has been conducting on children's perspectives of play, mostly focusing on how children differentiate between the notions of play and work. Nancy King's work in the late 1970's and 1980's (King, 1979; 1982; 1987) involved interviewing kindergarten students, who defined play as voluntary, self-selected activity, and "the more dimensions of an activity to come directly under the child's control, the greater the likelihood that the activity would be labelled play." (King, 1979, p. 85). She found that children identified three categories of classroom play: instrumental play, recreation, and illicit play (King, 1982). Finally, she found that as children progressed from kindergarten to grade five, their definition of play changed from depending on the social context (teacher vs. child initiated), to developing an understanding of the concept of pleasure, so that different children labelled different activities as play, and the same children classified some activities as play on one day but not another, but the children seemed to share an understanding of what makes an activity play, "the application of the criteria or the relative importance of the criterion, then, rely on the individual orientation of each child. The criteria themselves, however, are uniform and stable" (King, 1987, p. 145).

More recently, Howard (2002) explored 111 three- to six-year-olds perceptions' of play, work, and learning through the Activity Apperception Story Procedure. This procedure required children to classify photographs as either play or work, and learning or not learning. The children were then asked to justify some of those decisions. This study found that children tended to link work with learning,

and play with not learning. Children were more likely to choose work if the photo included an image of a teacher, and if the children in the photo were at a table. They were more likely to choose play if the photo included elements of positive affect, such as smiling or laughing. The authors concluded that young children are capable of distinguishing between play and work.

The observations that children distinguish play from work in school lead us to question if the same criteria is used to classify play and work activities outside of school. Although it is valuable to seek children's input in defining play, research into children's perceptions of their play preferences, and their emotional experiences during play, appears to be lacking.

Summary

While educators, policy-makers and textbook authors are quick to cite the theoretical work of Jean Piaget and Lev Vygotsky as they justify the centrality of play in early childhood educational programs (Bredekamp & Copple, 1997; McCain et al, 2007; Quebec Ministry of Education, 2001), other theorists, such as Sutton-Smith (1997) and Canella (1997), question the direct link between play and child development. Research relating play to cognitive development, creativity, and social and emotional competence is fraught with methodological issues and inconsistencies, and has focused primarily on play in preschool or kindergarten classrooms. Research on children's use of time has neglected to examine play in detail, although it has found that unstructured play is one of, if not the most, common out of school activity for young children (Hoffeth & Sandberg, 2001; Lareau, 2000; Tudge et al, 2001). Research on parental attitudes towards play has

focused solely on preschool and kindergarten children, and research on child attitudes towards play has been limited to eliciting children's definitions of play, particularly as opposed to the concept of work.

School-aged children continue to play outside of school, but research using play as an independent variable has not found any associations between play as a generic category and social or academic outcomes (Hofferth & Sandberg, 2001; McHale et al, 2001). However, research has shown that the amount of time children spend in play both in and out of school decreases dramatically as children begin grade one (Hartmann & Rollett, 1994; Hofferth & Sandberg, 2001; Patton & Mercer, 1996; Yeom, 1998). In addition, research evidence suggests that the positive benefits of play appear to transfer from one context to another (Fantuzzi & McWayne, 2002; Hartmann & Rollett, 1994). Therefore, a study investigating participation in various play activities outside of school and their relationship to measures of children's cognitive, social, and emotional development, and creativity at the early primary level, would contribute to the field of play research.

In addition to examining the impact of out of school play on children's development, it is necessary to define the activities, the context (setting, materials and participants) and the attitudes surrounding play outside of school. An understanding of parental beliefs about play at school age would help to provide a more complete picture of the role of play in children's lives as they transition from kindergarten to grade one. A study examining this topic should include not only those forms of play prioritized in early childhood centres and kindergarten classrooms (i.e., dramatic play, sand and water play, blocks and Lego construction)

but also play activities which Canella (1997), Löfdahl (2005), and Sutton-Smith (1997) label as undesirable or illicit (such as weapon play), as well as play with more commercial toys like Barbie or action figures, which children enjoy but educators often feel uncomfortable with, and exclude from classrooms (Hartmann & Brougére, 2004). Finally, the perspectives of the children themselves must not be excluded from the discussion.

CHAPTER 3 - METHODOLOGY

Research Design

In order to obtain a meaningful understanding of the role of play in the out of school lives of grade one children, and whether it has an impact on developmental outcomes, an embedded correlational model mixed methods design was used. This design features qualitative data embedded within a quantitative design, with the qualitative data serving to explain how the mechanisms work within the correlational model (Creswell & Clark, 2007). In the present study, parents provided quantitative data about their children's use of time outside of school. In addition, both parents and children provided qualitative data about the same topic. Quantitative outcome measures were collected from the children and their teachers.

Participants and Setting

Participants were 69 grade one children (42 males, 27 females) from suburban neighbourhoods outside of Montreal. Data was also collected from the parents of 56 (38 males, 18 females) of those children, and the teachers of 45 children from this subset. The children attended 19 different grade one classes within seven different public schools in two English-language school boards, and two different French elementary schools. The majority of the children (81.3%) attended French immersion programs, while the remainder attended English language (15.8%) and French language programmes (2.9%). The majority of the children were born in the province of Quebec (n=62, 89.9%), while the remainder

were born elsewhere in Canada, Europe, and Asia. Parents identified their children's ethnicity, with the majority being classified as of European descent (n=34, 49.3%), followed by of mixed heritage (n=9, 13%). The majority of parents (60.9% of mothers, 50.7% of fathers) were born in Quebec, and spoke English (40.6% of mothers, 47.8% of fathers) or French at home (29% of mothers, 14.5% of fathers). The majority of parents were university educated (40.5% of mothers, 30.4% of fathers) and were working full-time (46.4% of mothers, 60.9% of fathers).

Most of the children were first-borns (n=25, 36.2%), and most had either one (n=24, 34.8%) or two (n=18, 26.1%) siblings at home. Only five participants were only children (7.2%) and two sets of twin boys (who each had one older sibling) participated in the study. The majority of participants who shared this information had two parents who were either living together or apart, but who were both involved in the child's life (n=45, 65.2%). Seven parents reported that only one parent was involved in the child's life (10.1%), four families reported living with grandparents as well as parents (5.8%), and one family reported living with a number of disabled adults whom the parents cared for (1.5%).

Measures

Time Diary (Daily Activities) Questionnaire

Studies on children's time use outside of school use three different methods of data collection: observations, on-time self reporting, and recall self-reporting (Ben-Arieh & Ofir, 2002). Observations involve a researcher or other external person observing the children for a period of time. This method is time-consuming,

and also intrusive. On-time self-reporting involves the participants carrying a pager, which beeps at random intervals, at which point the participant writes down where they are, who they are with, and what they are doing. This method is costly and requires technological expertise. On-time self reporting can also involve the participants filling out a diary, but research has shown that participants need training to fill them out correctly, the response rate is usually low, and children often omit embarrassing or undesired behaviours, as well as events which last only a short time. Diaries are time-consuming for the participants and require significant incentives to complete (Ben Arieh & Ofir, 2002). Finally, recall self-reporting includes the stylized time estimate as well as the time budget method. Although the idea of asking how much time a child usually spends each day or week engaged in particular play behaviours is appealing, research has shown that this method does not result in reliable data (Ben Arieh & Ofir, 2002; Sandberg & Hofferth, 2001). The recall time budget, in which participants were asked to provide diary-type information for the previous 24-hour period, and which may be presented as an interview or a questionnaire, on the other hand, has been shown to be both valid and reliable (Ben Arieh & Ofir, 2002; Sandberg & Hofferth, 2001; Larson & Verma, 1999).

Therefore, for this study, the *Time Diary (Daily Activities) Questionnaire* was developed (See Appendix B) by modifying Parmar's (2000) *Daily Activities Checklist* and the University of Michigan's Panel Study of Income Dynamic's *Time Diary Questionnaire* (Hofferth & Sandberg, 2001). This questionnaire was designed for a parent to fill out after the child is in bed at the end of a typical school day. As

opposed to other research that examines only the six hours or so after school (Hofferth & Jankuniene, 2001; Hofferth & Sandberg, 2001; Miller et al, 1995), this questionnaire also asked questions about children's time use in the morning before school. This questionnaire asked closed-ended questions about the amount of time children were engaged in particular types of play (e.g., active play, constructive play), homework tasks, structured activities, daycare, and media use. Parents were probed about whom the child was with, where the activity took place, and whether the child was doing anything else at the same time. It also contained a section with open-ended items about parental beliefs about their children's use of time and about play (e.g., Is there anything you would like to change, or wish you could change, about how your child spends his/her time after school?; Do you think that play is important for your child at his/her present age?). In addition, given the limitations of collecting data about one day in each child's life (McHale et al, 2001), parents were asked about whether the data they provided represented a typical day for their child. The *Time Diary (Daily Activities) Questionnaire* was pilot-tested with a small group of parents, and minor modifications were made.

Report Card Grades

Children's final report card grades for language (English or French) and math were used as the outcome measure for school achievement. Report card grades have been shown to be stable over time (Entwisle & Alexander, 1998), and related to standardized test scores (DuPaul, Volpe, Jitendra, Lutz, Lorah, & Gruber, 2004; Petrakos, 2006). Report cards are also real high-stakes measures that serve to define and categorize children throughout their school careers. Therefore, report

card grades, and not standardized test scores, were used in this study to measure academic achievement, and to represent two aspects of cognitive development (language and mathematical reasoning).

Thinking Creatively in Action and Movement

The Thinking Creatively in Action and Movement (TCAM; Torrence, 1981) was administered individually to children at school, by four different trained research assistants (of which the author was one). It was administered in either English or French, depending on the language the child was most comfortable with. This assessment was designed to assess fluency, originality, and imagination in children aged three to eight. The test consists of four subtests: (a) *How many Ways?* which assesses originality in moving across the floor; (b) *Can you move like?* which assesses imagination in replicating the movements of animals and a tree; (c) *What other ways?* which examines fluency and originality as children place a paper cup in a waste basket; and (d) *What might it be?* which assesses fluency and originality as children generate alternate uses for a paper cup. Not only is this assessment enjoyable for children to participate in, but, according to Cooper (1991), it has content validity, which could be improved by changing the wording to the instructions for the first subtest. Instead of asking children to walk or run, they were asked to think up as many different ways to move across the room as they could. The TCAM has shown inter-rater reliability scores of over 0.90, and a test-retest reliability co-efficient of 0.84 (Torrence, 1981).

Child Interview in Pictures and Words

Ben-Arieh and Ofir (2002) argue for the inclusion of the child's perspective in studies of children's time use, but they admit that preschool children are too young to serve as sources of information, and that there is an ongoing debate about the reliability of data provided by elementary school-aged children. Therefore, in this study, data about one specific day was collected from parents (who may have required their children's assistance, for example, in explaining what exactly it was they were playing in their room while dad was making dinner), but children's input was sought about what they liked to do outside of school, where and with whom they liked to play, and whether they felt they had enough time and choice in how their afternoons were structured (See Appendix C).

The child interview involved the child drawing pictures in response to specific prompts. Previous research has found that children use drawings as a language to express and communicate their thoughts, beliefs, and ideas (Lodge, 2007; Trautner & Milbrath, 2008). Research assistants (including the author) transcribed the child's words onto the picture, and then probed the child with further questions related to the pictures. This assessment has been adapted from Petrakos' (2006) social support interview, and involved the child drawing three separate pictures, one about grade one (draw yourself doing something you enjoy in grade one), one about social support (draw who helps you with school), and a third picture about their out of school time (draw what you like to do after school). The children were provided with at least eight different colours of coloured pencils or markers, and queried about whether they had enough time to do the things they

liked, how they felt when they engaged in these activities, and about specific activities, such as playing indoors, playing outdoors, and doing homework, as well as who they liked to spend time with, and where they liked to play (See Appendix C).

Behavior Assessment System for Children, second edition (BASC-2)

The BASC-2 Teacher Rating Scale (Reynolds & Kamphaus, 2004)) was used to measure children's social and emotional competence. This nationally normed, standardized assessment tool is designed to measure adaptive and problem behaviours in children and youth aged 2 to 21. The scale was administered to teachers, who completed 100 questions on a Likert-type four-point scale. Scoring is organized according to four basic scales: externalizing problems (hyperactivity, aggression, and conduct problems); internalizing problems (anxiety, depression, and somatization); behavioural symptoms (atypicality, withdrawal, attention problems, conduct problems); and adaptive skills (adaptability, leadership, social skills, functional communication, study skills). The authors reported that test-retest reliabilities range from 0.87 to 0.94 and that coefficients for internal consistency on the Teacher Rating Scale exceed 0.90. The BASC was translated into French by a Francophone research assistant, and teachers had the option of completing it in either language.

Demographic Questionnaire

Parents filled out a questionnaire and provided data about the child's birthday, parent and child birthplaces, ethnic background, languages spoken at home, number, ages, and genders of siblings, number of parents and other adults at

home, and parent employment and education. This data was examined in order to assess whether or not any relationships exist between children's play outside of school and demographic factors.

Procedure

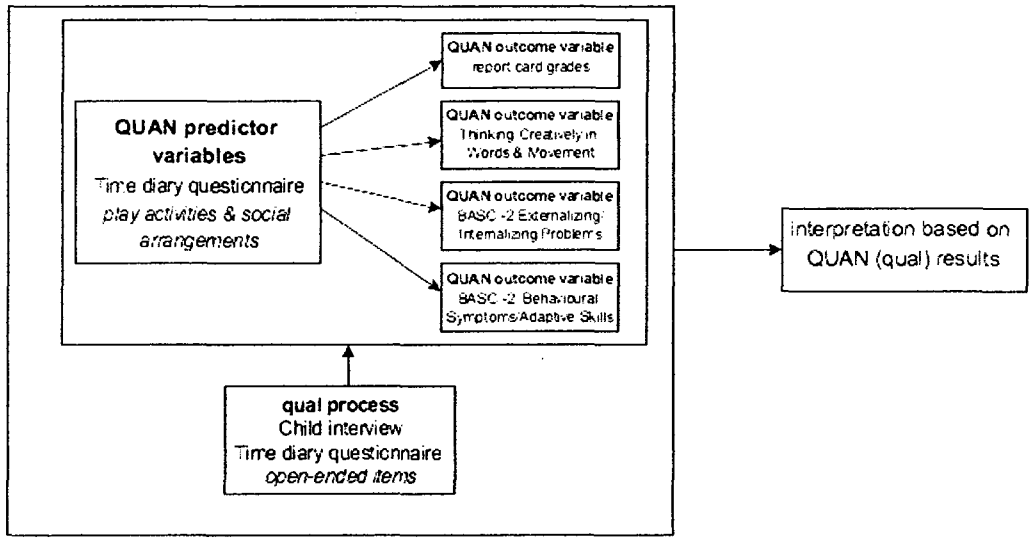
This study is part of a larger 2-year longitudinal research project on children's transition to school, entitled, *A two-year study of the psycho-social and contextual factors associated with children's early transition to school* (Petrakos, 2005-2009). School boards, local school governing boards, families and teachers provided consent for the study in the spring of 2006, while the children were attending kindergarten. Consent regarding participation in this sub-study was requested via an information letter to the parents identifying the Time Diary (Daily Activities) questionnaire and the TCAM as additional pieces that if completed would be used for the present study. The Time Diary and demographic questionnaires were sent home with the children in an envelope containing those and other forms as part of the larger study in the spring of 2008. Parents were instructed to fill out the time diary questionnaire for the previous weekday. Most of the questionnaires were sent home in the spring, as children in Quebec usually spend more time indoors during the winter, and more time outdoors during the summer. Spring and Fall represent, therefore, less extreme times during the year (McHale et al, 2001). However, parents in one school received the questionnaire in late winter, due to the timing of the larger research project. Therefore, 8 questionnaires were completed in February, 2008, and the remainder were completed between March and May, 2008.

Parents completed the questionnaires and returned them to their child's teachers. Of the parents who filled out the larger package of questionnaires, only two neglected to return the Daily Activities Questionnaire. Research assistants (including the author) conducted the TCAM assessment and the child interview with the children at their schools in the spring of 2008. All of the parents contacted gave consent for these two additional measures to be conducted at school. Teachers were provided with a packet of questionnaires that includes the BASC-2 in the spring of 2008. Final grade one report cards were collected at the end of the school year from the school secretaries. Seven parents sent in the DAQ after the end of the school year, and though these parents completed the entire questionnaire, only the open-ended questions were included in analyses, as it is unclear whether or not they were completed during the school year and returned late, or completed during the summer.

See Table 1 for a visual representation of the data collection procedure and Figure 1 for a visual diagram of the research design.

Table 1
Data Collection Procedure

	January to June 2008	**June 2008**
Parent	• Demographic Questionnaire • Time Diary Questionnaire	
Child	• Thinking Creatively in Words and Movement • Child Interview in Words and Pictures	
Teacher	• Behavior Assessment System for Children	• Report cards (Math and Language grades)



Procedures			
Predictors	**Outcomes**	**Process**	**Integrated Analysis**
• Time diary questionnaires closed-ended items sent home to parents	• Report cards collected from school • TCAM administered one-on-one to children in school • BASC-2 completed by teachers	• Time diary questionnaires open-ended items sent home to parents • Child interview conducted one-on-one at school	• Open-ended questions and child interviews re-analyzed based on results of correlation and regression analyses.
Products			
• Numerical item scores	• Numerical item scores • Correlation scores • Regression analyses	• Narrative text data • Child drawings • Themes	• Theme development • Theory development • Discussion

Figure 1. Visual Diagram of Research Design.

CHAPTER 4 - QUANTITATIVE RESULTS

The results will be presented as follows. First, the scoring and inputting procedures used will be described. Secondly, the results of descriptive data analysis will be presented. Thirdly, the results of correlation analysis will be presented, in order to determine whether any relationships exist between time diary data and the outcome measures. Finally, multiple regression analysis will be presented, to determine whether any predictive relationships exist between out of school play and academic achievement, school behaviour, and creativity.

Quantitative Data Analysis

The quantitative data was analyzed using Statistical Package for Social Sciences (SPSS version 16) software. Prior to inputting the data, the TCAM was scored by hand, following the detailed instructions in the manual (Torrence, 1981) by the author. The BASC teacher rating scales were scored using BASC-2 Assist software by three research assistants, including the author. Report cards were standard across the province, and each child received a percentage grade for math (subject result), calculated by the teacher based on weighted grades for problem solving, mathematical reasoning, and communicating using mathematical vocabulary and symbols, and language (subject result) using the primary language of instruction (English for English programme, French as a second language for French immersion and French for French programme). English and French grades were calculated by the teachers and weighted for reading and listening, writing,

producing different media, and using language to communicate and learn. French immersions grades were weighted for communicating in French, reading and understanding, and writing. Data from the DAQ was entered as is, but social context of play was summed from the different play activities, as parents were not asked directly how much total time the child had played with parents, siblings, alone, etc., but were probed about the social context of play after reporting on the amount of time spent in each activity. Parents' anecdotal notes (was child doing anything else at the same time?) were used to determine whether these different play activities were mutually exclusive. Cases in which it was impossible to determine how much total time the child had spent playing in each social context were excluded from analyses involving social context data.

While 69 children participated in the study during that academic year, only 56 parents returned DAQ questionnaires before the end of the school year. Only those children are included in the following quantitative data analysis. In addition, only the teachers of 45 students completed BASC teacher reports. Therefore, for some children, BASC data is missing. In addition, a small number of parents missed a page or two of the DAQ. Missing data was excluded from analysis, as the n size was too low to permit replacing missing data with a mean.

Descriptive statistics were used to compile data from the time diary data about the types of activities, the social context, and the amount of time children spend in particular play activities after school. Pearson product moment correlation analyses were then conducted to determine whether relationships exist between the Time Diary data and the outcome variables. Analyses were run separately for

different types of play, different social situations during play, total amount of time in play, total amount of choice time, and other activities taking place at home, such as free time in the morning, watching television, and doing homework.

Due to high correlations between outcome and predictor measures, canonical correlations were conducted in order to assign appropriate weights to each variable. Multiple regression analyses were then conducted with the canonical variables, in order to assess whether or not there is a predictive relationship between out of school play and a) academic achievement, b) creativity, or c) school behaviour.

Results

Descriptive statistics

In order to answer the first research question, how do grade one children spend their out of school play time? descriptive statistics and frequency counts were conducted. The results of these activities from the DAQ are presented in Table two.

Activities

Table 2 presents children's mean amount of time in various activities after school. Results indicate that children spend an average of one to two hours playing after school, with the most common forms of play being active physical play (mean range=between 30 and 90 minutes), pretend play (mean range=less than 60 minutes), creative play (mean range=less than 30 minutes) and constructive play (mean range=less than 30 minutes). The least common forms of play were board games and puzzles, watching others play, and other play, which was reported by four parents, whose children spent time playing with a pet, storytelling, and playing

with an I Yo stick. Parents reported that children, on average, had between 30 and 90 minutes to choose their own activity after school.

A frequency count indicating the number of children who engaged in each activity for any amount of time is presented in Table 3. In comparison to play time, children spent less than 60 minutes doing homework and watching television/videos/DVDs, less than 30 minutes using the computer for purposes other than homework or videogames (i.e., email, chat, surfing the internet), and less than 30 minutes in structured activities such as scouts, martial arts, or music lessons.

Table 2

Children's Out of school Play: Activities

Activity	Mean	Standard Deviation	Minimum	Maximum	N
Total play	3.33	1.34	0	5	51
Active physical play	2.10	1.17	0	5	51
Pretend play	1.18	1.05	0	4	51
Creative play	0.92	1.00	0	5	51
Constructive play	0.92	1.06	0	3	51
Rough and tumble play	0.69	0.79	0	3	51
Play with commercial toys	0.59	0.83	0	3	51
Video games	0.45	1.01	0	5	51
Music / Singing play	0.45	0.86	0	5	51
Board games and puzzles	0.33	0.59	0	2	51
Watching others play	0.31	0.93	0	5	51
Other play	0.14	0.49	0	2	51
Homework	1.44	0.91	0	4	50
Watching TV/DVDs/videos	1.22	0.95	0	3	50
Computer	0.16	0.47	0	2	50
Structured activity time	0.53	1.05	0	3	51
Total choice	2.81	1.24	0	5	49

Note: 0=none, 1=less than 30 minutes, 2=between 31 and 60 minutes, 3=between 61 and 90 minutes, 4=between 91 and 120 minutes, 5=more than 120 minutes

Table 3

Frequency Table: Activities

Activity	Frequency	Percentage
Total play	50	98.0
Active physical play	46	90.2
Pretend play	33	64.7
Creative play	30	58.8
Rough and tumble play	27	52.9
Constructive play	26	51.0
Play with commercial toys	20	39.2
Video games	12	23.5
Music / Singing play	17	33.3
Board games and puzzles	14	27.4
Watching others play	7	13.7
Other play	4	7.8
Homework	43	86.0
Watching TV/DVDs/videos	35	70.0
Computer	6	12.0
Structured activity time	11	21.6
Extracurricular activity practice	3	6.0
Total choice	48	98.0

Social Context of Play

The social context of play was measured by describing who children spent time playing with after school (see Table 4). Though parents were probed about various types of friends (friends from school, neighbours, etc.), there were few reports of play with each type of friend (see Table 10), and those categories were collapsed for most analyses. Children spent the majority of their playtime (between 30 and 90 minutes) playing with their siblings, followed by play with parents (less than 60 minutes), play alone (less than 60 minutes), and play with friend(s) (less than 30 minutes). Out of 50 responses, only 16 children played with friends after school, and only 2 children played with an adult other than their parents (i.e., relative, friend, babysitter). There were 37 reports of play with sibling(s), 34 reports of play with parents, and 30 reports of play alone. Table 5 displays the frequencies of each social context during play.

Table 4

Children's Out of school Play: Social Setting

Social Setting	Mean	Standard Deviation	Minimum	Maximum	N
Play with sibling(s)	2.36	1.85	0	5	50
Play with parent(s)	1.59	1.45	0	5	50
Play alone	1.20	1.14	0	4	50
Play with friend(s)	0.76	1.25	0	5	50

Note: 0=none, 1=less than 30 minutes, 2=between 31 and 60 minutes, 3=between 61 and 90 minutes, 4=between 91 and 120 minutes, 5=more than 120 minutes

Table 5

Frequency Table: Social Contexts

Social Setting	Frequency	Percentage
Play with sibling(s)	37	74.0
Play with parent(s)	34	68.0
Play with other adult(s)	2	4.0
Play alone	30	60.0
Play with friend(s) from class (not after school care)	4	8.0
Play with friend from school (not in same class)	3	6.0
Play with neighbour	6	12.0
Play with other friend	4	8.0
Play with cousin	1	2.0
Play with any friend	16	32.0

Non-Play Time in Social Contexts

For comparison purposes, Table 6 illustrates the amount of time children spent in various social contexts engaged in non-play activities. It is interesting to note, that while children spent the majority of their playtime and time watching television and other media with siblings, they spent the majority of their homework time with parents.

Table 6

Non-play time in social settings

Activity	Social context	Mean	Std. Dev.	Min.	Max.	N
homework	Alone	0.21	.50	0	2	48
	Parent(s)	1.23	.83	0	3	48
	Sibling(s)	0.10	.47	0	3	48
TV/DVD/video	Alone	0.10	.42	0	2	49
	Parent(s)	0.67	.94	0	3	49
	Sibling(s)	0.98	.97	0	3	49

Before School Activities

Parents were also queried about whether or not their children had any free time before school in the morning. The mean number of minutes of free time in the morning was 27. The most frequent activities children engaged in during that time was watching television (mean = 13.18 minutes), followed by play (mean = 12.64 minutes) (see Table 12). Almost half of the children spent some time playing before school (n=27, 48.4%), and slightly more than half spent time watching television (n=29, 53.7%) (see Table 7). Children spent the majority of their free time in the morning with siblings (mean = 18.09 minutes), followed by alone (mean = 7.73 minutes) (see Table 8). Finally, 44 out of 55 children had free time in the morning, ranging from 10 to 80 minutes (see Table 9). Twenty-nine parents reported that their children watched television in the morning, two did homework, and one each reported: chatting with mom, listening to music, reading. Thirty-two out of 55 parents reported that their children played in the morning, with 11 identifying pretend play, 5 identifying constructive play, and 3 identifying active physical play when asked to specify the play activity (see table 10).

Table 7

Before School Activities (in minutes)

Activity	Mean	Std. Dev.	Min.	Max.	N
play	12.64	13.77	0	60	55
homework	0.36	1.89	0	10	55
television	13.18	15.50	0	60	55
videogames	0.73	4.24	0	30	55
other	0.56	2.86	0	15	54

Table 8

Before School Social Situations (in minutes)

Social Context	Mean	Std. Dev.	Min.	Max.	N
Alone	7.73	12.90	0	60	55
w/sibling(s)	18.09	20.47	0	75	55
w/parent(s)	3.45	9.52	0	40	55
w/friend	0.36	2.70	0	20	55

Table 9

Before School Frequencies

	Frequency	Percent
0	11	19.6
1-15 minutes	6	10.8
16-30 minutes	22	39.3
31-45 minutes	6	10.7
46-60 minutes	7	12.5
61-75 minutes	2	3.6
76-90 minutes	1	1.8

Table 10

Before School Play

Play Activity	Frequency	Percent
Pretend play	11	19.6
Constructive play	5	8.9
Active physical play	3	5.4
Creative play	2	3.6
Videogame play	2	3.6
Pet play	1	1.8
Computer play	1	1.8
Games with rules	1	1.8
Computer and creative play	1	1.8
Total Number of children who played before school	27	48.2

Other Outings

Seventeen parents reported that their children went somewhere other than home, school, or childcare, during the day they completed the DAQ. Responses are

detailed in Table 11, but the most frequent responses were friend's house (n=4), structured activity (n=3), and grocery shopping (n=3).

Table 11

Other Outings

Did your child go anywhere this afternoon other than school, home, and after school childcare?	Frequency	Percent
No	30	63.8
Friend's house	4	8.51
Grocery shopping	3	6.38
Structured activity	3	6.38
Structured activity and shopping	2	4.26
Visit relative	1	2.13
Visit relative and sibling's daycare	1	2.13
Library	1	2.13
School play	1	2.13
Babysitter's house	1	2.13
Total responses	47	100.0

Play locations.

Parents were probed about where children's play took place after reporting on the amount of time the child engaged in each type of play. Active physical play was most often reported as taking place in the yard (n=11), followed by home (n=9), home and yard (n=9) and street/sidewalk/alley (n=6). In contrast, the majority of constructive play (n=22), pretend play (n=25), creative play (n=25), music and singling play (n=13), videogame play (n=11), rough and tumble play (n=22), play with commercial toys (n= 17), watching others play (n=4), other play (n=3), and all accounts of board game and puzzle play (n=12), took place at home. Similarly, homework, televison/DVD/video viewing and computer activities also took place, for the most part, at home. Structured activities, for the three children who attended, took place at a community centre, a park, and a private martial arts studio.

Correlation and Regression analyses

Pearson Product Moment Correlation Analysis

Pearson product moment correlation analyses were conducted, in order to answer the second and third research questions: (a) *Does time spent in unstructured play outside of school predict grade one children's creativity, cognitive, social, or emotional outcomes in school?* and (b) *Does time spent playing with parents, friends, siblings, or alone predict any of the outcome variables in school?* Specifically, amount of time in play activities and play social contexts were analyzed as predictor variables, while report card grades in math and language, the five subscales of the BASC, and the three subscales of the TCAM were analyzed as outcome variables. Table 12 displays all of the significant correlations.

Table 12

Significant correlations

	Free time am	Choice pm	Watching others play	Play with commercial toys	Time in before school care	Time in after school care	Travel time am	Travel time pm	Total play with parents	Total play alone	Structured activity time	TV/dvd/video time
Report card language	.305*	.402**										
Report card math	318*											
BASC-school problems		-.427*										
BASC-externalizing problems					.391*	.383*						
BASC-behavioural symptoms					.352*							
BASC-adaptive skills		.388*	.439*		-.385*	-.399*			.449*			
TCAM - fluency			.305*	.278*			.318*			-.281**	.282*	
TCAM - originality			.307*	.361**			.389**				.346*	
TCAM - imagination							.360*	.302*				-.387*

*p=<0.05, **p=<0.01

Play and academic achievement. Report card languages grades were positively associated with minutes of free time in the morning $r(53) = .305$, $p < 0.05$ and amount of total choice in the afternoon and evening $r(47) = .402$, $p < 0.01$. Report card math grades were positively associated with free time in the morning $r(50) = .318$, $p < 0.05$.

Play and social development. The school problems subscale of the BASC teacher report was negatively associated with total activity choice in the afternoon and evening $r(29) = -.427$, $p < 0.05$. The adaptive skills subscale of the BASC teacher report was positively associated with watching others play $r(31) = .439$, $p < 0.05$, total choice in the afternoon and evening $r(29) = .388$, $p < 0.05$, and total play time with parents $r(30) = .449$, $p < 0.05$. It was negatively associated with time in before school child care $r(34) = -.385$, $p < 0.05$ and after school child care $r(31) = -.399$, < 0.05. The externalizing problems subscale of the BASC teacher report was positively associated with time spent in before school child care $r(34) = .391$, $p < 0.05$ and in after school care $r(31) = .383$, $p < 0.05$. The behavioral symptoms subscale of the BASC teacher report was positively associated with time in before school child care $r(34) = .352$, $p < 0.05$.

Play and creativity. The fluency subscale of the TCAM was positively associated with play with commercial toys $r(51) = .278$, $p < 0.05$, watching others play $r(51) = .305$, $p < 0.05$, structured activity time $r(51) = .282$, $p < 0.05$, and travel time in the morning $r(47) = .318$, $p < 0.05$ and negatively associated with total play alone $r(50) = -.281$, $p < 0.01$. The originality subscale of the TCAM was positively

associated with travel time in the morning $r(47) = .389$, $p < 0.01$), play with commercial toys $r(51) = .361$, $p < 0.01$), watching other children play $r(51) = .307$, $p < 0.05$, and structured activity time $r(51) = .346$, $p < 0.05$. The imagination subscale of the TCAM was positively associated with travel time in the morning $r(47) = .360$, $p < 0.05$ and travel time in the afternoon $r(45) = .302$, $p < 0.05$, and negatively associated with time watching television, videos, or DVD's $r(50) = -.387$, $p < 0.01$.

Correlations among Measures

Within outcome measures. Significant correlations were found between math and language report card grades, within TCAM subscale scores, and within BASC subscale scores (See Table 13).

Amongst outcome measures. Significant correlations were also found between report card scores and all of the BASC subscale scores, and between TCAM imagination and BASC teacher reported internalizing problems $r(45) = 0.345$, $p < 0.05$ (See Table 13).

Table 13

Correlations within and amongst outcome measures

	1	2	3	4	5	6	7	8	9	10
1. Report card language	-	.803**	- .763**	- .519**	-.369*	- .617**	.679**	-.178	-.214	-.066
2. Report card math		-	- .711**	- .449**	- .466**	- .561**	.551**	-.083	-.178	-.155
3. BASC-school problems			-	.738**	.666**	.864**	- .844**	-.171	-.034	.121
4. BASC-externalizing problems				-	.433**	.887**	- .768**	-.160	-.097	-.142
5. BASC – internalizing problems					-	.681**	- .483**	-.259	-.176	.345*
6. BASC-behavioral symptoms						-	- .840**	-.165	-.077	.061
7. BASC-adaptive skills							-	.245	.194	.105
8. TCAM - fluency								-	.866**	.267*
9. TCAM - originality									-	.300*
10. TCAM - imagination										-

*p=<0.05, **p=<0.01

Correlations amongst related predictor variables. Pearson product moment correlations were also conducted between the variables that correlated significantly with report card grades, BASC scores, and TCAM scores. Tables 14, 15, and 16 identify which of those predictor variables are related.

Table 14

Correlations among predictor variables - Report card

	1	2
1.Minutes of free time in morning	-	.412**
2. Total Choice	-	-

Table 15

Correlations among predictor variables - TCAM

	1	2	3	4	5	6	7
1. Travel time am	-	.759**	.131	-.040	-.012	.074	-.181
2. Travel time pm		-	.223	.175	.059	.294	-.043
3. total play alone			-	.110	.064	-.099	-.159
4. time watching tv/DVD/video				-	.010	.011	-.006
5. play with commercial toys					-	.354*	-.043
6. watching other children play						-	.032
7. Structured Activity time							-

*p=<0.05, **p=<0.01

Table 16

Correlations among predictor variables - BASC

	1	2	3	4	5
1.Watching other children play	-	.088	.411**	-.232	-.147
2. Total choice		-	.348*	-.378**	-.337*
3. Total play with parents			-	-.336*	-.215
4. Daycare pm				-	.383**
5. Daycare am					-

*p=<0.05, **p=<0.01

Canonical Correlations

Due to the correlations within the predictor and outcome measures, canonical correlation analysis was conducted in order to understand the relationship between two sets of related variables. Each significant combination of variables, or root, was examined, in order to determine which variables exerted the most influence on the relationship between the two groups of parametrically correlated variables.

According to Stevens (1986), relatively small sample sizes (e.g., n=50) will detect strong canonical correlations in a set of data, though there is some risk of type 2 error. However, if one wants to interpret the most significant root only, one should have at least 20 times as many cases as variables. In the following four canonical correlation analyses, there are only between 43 and 56 sets of data, so these results need to be interpreted with caution.

A weighted variable was created based on the canonical correlation between report card math and language grades and free time in the morning and free choice in the afternoon/evening. The non-standardized coefficient for the single root extracted from this canonical correlation analysis was .43, explaining 19% of the variance (p=0.05).

The same procedure was employed using the TCAM fluency and originality scores and time spent watching others play and playing with commercial toys. The non-standardized coefficient for the single root extracted from this canonical correlation analysis was .41, explaining 17% of the variance (p=0.05).

Finally, a weighted variable was created based on the canonical correlation between all five of the BASC subscale scores and total play with parents, total choice in the afternoon/evening, and time spent watching others play. The non-standardized coefficient for the single root extracted from this canonical correlation analysis was .71, explaining 50% of the variance (p=0.02).

Multiple Regression Analysis

Regression analyses were conducted based on the canonical variables in order to determine whether the significant relationships discussed above were predictive in nature. These analyses revealed the following relationships, all of which were significant at least at the 0.05 level (See Table 17).

Table 17

Regression Equations

Predictor Variable	Outcome Variable	Regression Equation	R^2	df	F	p
Free time in the morning, total choice in the afternoon/evening	Report card math and language grades	Report card language grades = 0.37*total choice time + 1.46	.19	(2,40)	5.43	.03
Watching others play, play with commercial toys	Creativity Scores: fluency and originality	TCAM originality score = 0.29*time playing with commercial toys + 4.74	.17	(2,48)	4.20	.05
Total choice in the afternoon/evening, watching others play, total play with parents	School behaviour scores	School problems = total choice*-0.36 + 1.49	.50	(3,33)	4.71	.04
Total choice in the afternoon/evening, watching others play, total play with parents	School behaviour scores	Adaptive skills = time watching others*0.40 + 1.42	.50	(3,33)	7.45	.01
Total choice in the afternoon/evening, watching others play, total play with parents	School behaviour scores	Adaptive skills= total choice*0.29+1.15	.50	(3,33)	4.04	.05

CHAPTER 5 - QUALITATIVE ANALYSIS AND FINDINGS

Data Analysis

In order to answer the fourth research question, *How do parents and children view out of school play at the grade one level?*, qualitative data coding and analyses were carried out.

Daily Activities Questionnaire and Child Interview Text

The DAQ open-ended answers completed by parents (n=55) were translated from French to English, where applicable, and all text was digitized into text documents. Preliminary coding was done as the data were being typed, using the computer program Stickies. Further coding and categorizing was completed using Hyperresearch qualitative data analysis software, in an attempt to understand how parents view children's play at the grade one level, and to identify any factors that support or challenge the families' abilities to structure their after-school time.

Similarly, the child interview notes (n=69) were translated when necessary and digitized, before preliminary coding using Stickies and more detailed coding and categorizing using Hyperresearch. This analysis focused on which activities children enjoyed, as well as where they liked to play, and whom they liked to play with.

Children's Drawings

The drawings were initially sorted into piles based on their content: the activities, number and relationship of people in picture, and setting of drawing,

before they were digitized into jpeg documents and analyzed using Hyperresearch. This more detailed analysis focused on the above criteria, as well as on elements of visual language, such as size and contour, choice of colour, and the placement of people and objects, examining the choices the children made in representing their favourite thing to do at home (Lodge, 2007; Trautner & Milbrath, 2008).

Holistic Child Data

Comparison of Parent and Child Responses

A chart was created in Microsoft Excel, comparing child self-reports of preferred out of school activities with parental reports of the same information. This chart was analyzed for patterns in similarities and differences between child and parental reporting and perception of the same information.

Vignettes

Finally, three children were chosen for more detailed analysis, in an effort to provide examples of different, but typical, participants. All of the data for these three participants was described in detail, in order to provide the reader with a brief illustration of parental and child perspectives on out of school play at the grade one level.

Findings

Parents' Perceptions of the Role of Play

Although all the parents agreed that play is important for their child at his or her present age, they had very different ideas about the role of play activities in

their children's lives. A number of parents echoed the curriculum documents and educational theory texts (Bennett, Wood & Rogers, 1997; Frost, Wortham & Reifel, 2005; Moyles, 2005; Ministère de l'emploi, de la solidarité sociale et de la famille, 2004; Murphy, 2006; Quebec Ministry of Education, 2001), by explaining the value of play for social, emotional, cognitive, physical, and creative development. However, others explained the value of play in building relationships, "it is a natural way for parents to bond with their child, as well as with other children/peers," enhancing confidence or self-esteem, allowing the child to relax or "let out all excess energy," building self-awareness or self-expression, and teaching children to respect differences, "culture, religion, and colour." Many parents saw play as a natural part of childhood and as being important simply because it is fun. One parent, who took great care to explain her weeknight routine and the importance of routine in her family, explained that play was important, "but on the weekends."

Parental Regulation of Children's Play

The most common type of play encouraged by parents was, "active physical play to promote healthy lifestyle." Parents also felt good when their children engaged in creative and pretend play, or when they assembled puzzles or played board games. "Active play: physical play is part of healthy lifestyle. Creative play: she's good at it and expresses herself through this. Pretend play: it's a way to explore new avenues, it provokes questioning, it's a way to deal with her fears and evacuate the pressure." Some parents were particularly encouraging of outdoor play, without defining in detail the types of activities the children engage in outdoors. "If it's nice outside, as a rule, he has to play outside." A few parents

explained that they encourage the types of play that they themselves like to participate in with their child, "I encourage sports – to promote active lifestyle, puzzles, games – for academic, but mostly because these are things I like to play with them." Some parents expressed their support for their child's freedom in determining what and how they wanted to play "free play, their time to initiate/direct their own activity."

By far the most common activity parents discouraged was, "violent games," or "aggressive play," as one mother explained, "there is enough violence on T.V. and all around us, why promote the same via play time?" Some parents were also concerned about potential physical injury that could result from rough or dangerous play, "with four boys in the house, there has to be a limit to certain games." Parents reported limiting television viewing, computer and videogame time, and explained, "video and computer games, no advantage at all," or "anti-social play. For me that is TV and videogames."

The majority of the questionnaires were completed by mothers; only two fathers identified themselves as respondents. One of those fathers explained that he encouraged "roughhousing/wrestling" to help his daughter control aggression, but that he did not allow his daughter to wrestle with the neighbourhood children, as he was worried other parents would not permit such play.

A smaller number of parents also expressed concern with play that is mean-spirited, that may result in hurt feelings, or is simply impolite. "Anything that excludes people," "Teasing, hitting, although even these have educational benefit if learned from. We discourage these just on principal of being mean, naughty," and

play that is not age appropriate, "J. likes to role play theatrically. I try to keep it at an innocent level. I discourage violence or play too sexy," or " Barbie Bratz type dolls - just don't like the look of Bratz, too provocative dress for young kids, no real point to those toys."

These findings resonate with King's (1987) classification of elementary-aged children's play into instrumental, illicit, and recreational. While King's school-based research noted the encouragement and facilitation of instrumental play in the classroom, she found that teachers largely ignored recreational play, which took place only at recess, and actively discouraged and punished play they deemed illicit. In contrast, the parents in this study seem to encourage both instrumental and recreational play. This support for recreational play may be based on concerns for children's physical health and fitness, or may be indicative of a dichotomy between the role of play in the classroom and the role of play during children's leisure time.

The general agreement, particularly amongst mothers, about the types of play that are discouraged, seems to echo the position of some post-modernist theorists (e.g., Jones et al., 2005; Sutton-Smith, 1997) that play is romanticized on the one hand (as the parents unanimously agreed that play was vital to their children's development), and used as a means of social control on the other.

Child Interviews

Activities

In examining the answers children gave to questions about what they enjoy doing after school, patterns began to emerge with respect to different activities, as

well as the social context of the activity. The activities children mentioned were categorized as active play, fantasy or pretend play, play with toys (i.e., dinosaurs or figurines), building with blocks or Lego, playing board games, doing art or drawing, media play (computer/videogames/TV), and pet play. While some children mentioned a number of interests, such as watching television and "I do whatever I want, I play outside, or with my toys, I play with my family, play in the snow, go to the store," others seemed to focus on only one or two activities.

Some children had a difficult time recalling what they do after school, while others described elaborate play scenes such as, "This is me. After this the others were hiding, I found three, I still needed to find my brother. He played a joke on me. He was swimming and he hid under the water when I came to find him."

Social Context

The vast majority of children mentioned friends as playmates, although a small number complained about their parents not allowing friends over, not allowing them to go to friends' houses, or that they did not play with friends very often outside of school, "my mom said mostly people don't come over to my house. I'm alone every time."

A little more than half of the children reported that they enjoyed playing with their parents, while the others stated that their parents did not play with them. For example, "They never play because my parents are too busy."

Of those children with siblings, many of them seemed to take playing with their sibling(s) for granted, for example, some children explained that they only play

alone when their brother or sister is busy or annoying them. However, others reported that their siblings will not play with them, or that they simply do not play with their siblings. Age differences and gender did not seem to fully explain whether a sibling was considered a playmate, as children with siblings close and further apart in age, and of the same and opposite sex, reported both joy and conflict in the sibling play relationship, as well as siblings who were not playmates.

Surprisingly, few children mentioned their extended family. Only 11 out of 69 children mentioned playing with or spending time with grandparents, uncles, and cousins. About half the children reported they liked playing alone, while the other half did not, "No, it's boring, there's nothing to do."

Location of Play

When asked where they liked to play, children identified their homes, as well as particular locations in their home, such as "in my playroom," or "in my room and in the basement and on the sofa." Others identified outdoor locations such as "outside" in general, "my backyard," "the park," and "the pool." Many children reported that their favourite place to play was at "my friends' houses" in general, or at the house of one particular friend. Three children responded that they liked to play "on the computer" or "on my PS2 (Play Station Two console)." One child referred specifically to his outdoor trampoline, one answered "wherever," and a few listed a number of locations, such as "backyard, at S.'s house (friend), all sorts of places."

Play Styles

Thirty years ago, Wolf and Gardner (1979), in an analysis of young children's play, noted that children could be classified as either dramatists or patterners. More recent research (Han, 2007) found that of 58 three- to five-year-old children, only 14 could be classified as purely one or the other. However, the notion that children have distinct, and sometimes overlapping play styles, seems to emerge when examining this data for patterns between activity preference, social preference, and play location preference. This notion will be explored further in the vignette analysis below, but it bears noting that children who discussed playing outdoors often described active physical play, as well as either siblings or peers. Discussions of play inside the home, particularly play that could be classified as more calm or less active, such as play with toys or drawing/art, often involved either one sibling, or the child alone. The majority of children who chose television or videogames as their preferred activity often listed a number of other pleasurable activities, when probed. However, there were a very small number of boys (n=2) who reported that all they liked to do was play videogames, and that they did not like to spend time with anyone.

Opportunities for Play

Discussions with the children revealed vast differences in the types of play opportunities they may have had outside of school. In addition to the presence or absence of siblings and the question of whether or not they played with their sibling(s) and parent(s), other activities such as after school childcare and

extracurricular classes, as well as the availability of neighbourhood children to play with, and the ability to invite friends over, seem to help paint a picture of these children's social worlds beyond their schools. Some children explained that, "I don't play with neighbours 'cause they're just grown-ups," while others were able to explain in great detail the fun they have on a regular basis with the kids who live on their street. For example, "I play with my friend R. 'cause he lives beside me and I always get to play with him on my road. I play like hockey and stuff like basketball, 'cause I have a basketball net on my road" or "There is this mud place all the kids like to go. We play in it. We made a trap once."

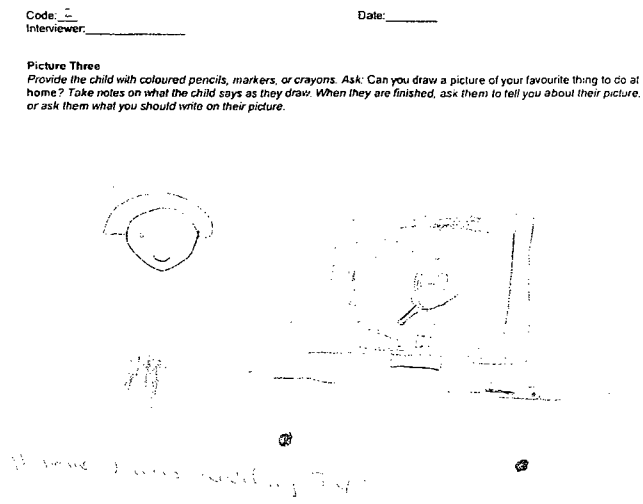
While most children's faces lit up when asked if they like to play at friends' houses, a small number of children explained, that "I can't invite friends 'cause my mom says no. I have to be older to invite friends."

Swimming, hockey, piano, dance, martial art, gymnastics, soccer, and scouts appear to be the most popular after school activities that the children participated in after school or on the weekend. The number of activities a child was likely to attend each week seemed to vary by school. In three of the four schools that the majority of children in the study attended, children were more likely to attend one or no activities, while in the fourth school most children attended two or three activities each week. The majority of children in all four schools said they did not attend daycare.

Drawings

Activities

Children (n=69) were asked to draw a picture of their favourite thing to do at home. The vast majority of children (n= 57) drew themselves playing. Two children refused to draw a picture, but described their favourite activity (playing videogames in both instances) instead. The 67 drawings depicted active outdoor play (e.g., riding bikes, playing in the snow, playing hide and seek)(n=18), videogame play on a console or computer (n=14), play with toys (n=8), watching television programmes or movies on television (n=7), dramatic play (n=5), pet play (n=4), rough and tumble play (n=2), homework (n=2), drawing (n=2), and helping parents by doing dishes (n=1). Five children drew pictures of themselves with either a sibling or a friend, not obviously engaged in any activity. One child drew a picture of the lockers at school because, as she put it, "I like to do things at school only!" A few of the children spilt their pages in half by making a line through the centre of the paper, and drew their two favourite activities. One child drew himself playing videogames on one side of the page, drawing at a table on the other side, and his sister playing alone at the top of a set of stairs, while another drew himself playing with his toy garbage truck while watching TV (See Figures 2 to 4 for examples).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Picture Three

Provide the child with coloured pencils, markers, or crayons. Ask: Can you draw a picture of your favourite thing to do at home? *Take notes on what the child says as they draw. When they are finished, ask them to tell you about their picture, or ask them what you should write on their picture.*

Figure 2. Drawing example one.

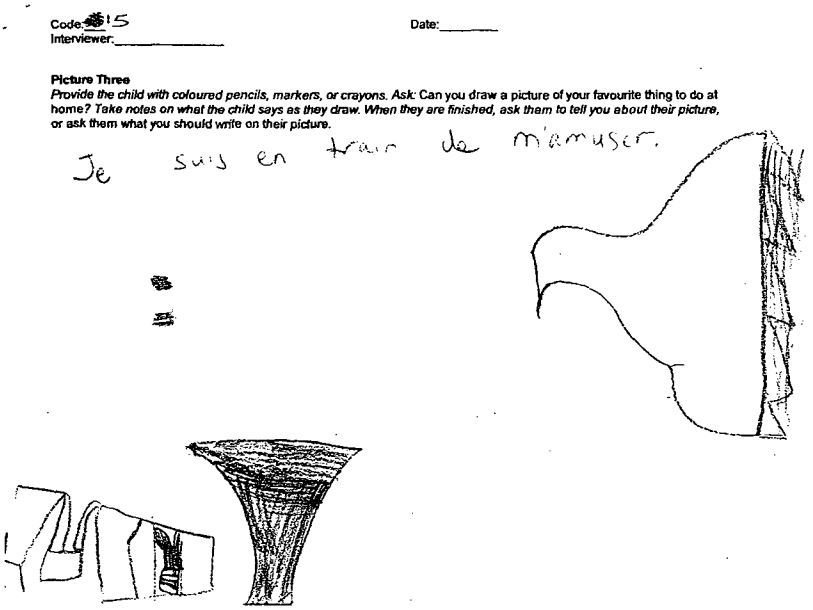

Figure 3. Drawing example two.

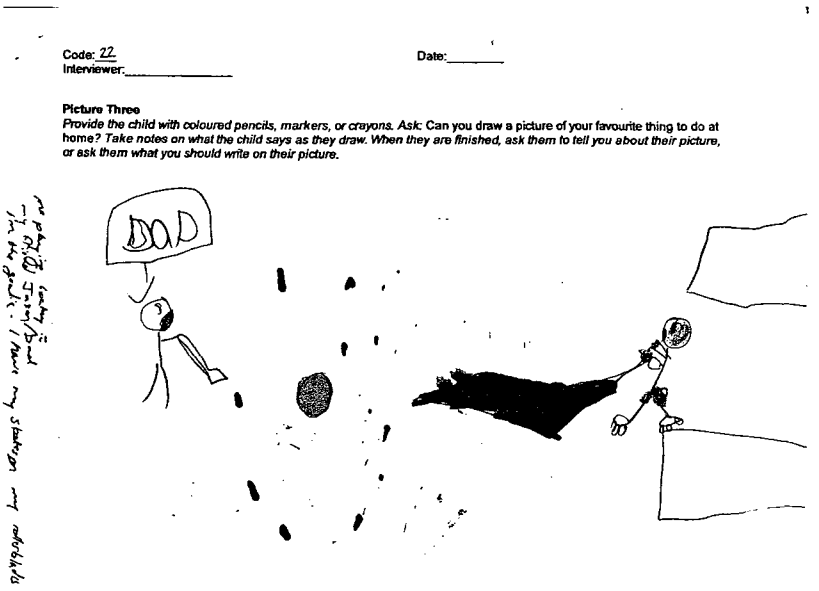

Figure 4. Drawing example three.

Social Context

Children's drawings also differed with respect to the number and relationship of people in the picture. The majority of children drew themselves alone (n=37), even though some of them, in describing their drawing, mentioned playing with someone else. Thirteen children drew themselves with one or more siblings, four children drew themselves with a parent, four children drew themselves with one friend, one child drew herself with three friends, and nine children drew an object (i.e., dollhouse, Lego construction, computer, trampoline) or outdoor scene that did not include any people. It is interesting to note that of the

four drawings of parents, two were of children playing with their fathers (hockey and rough and tumble play), while the other two were of mothers, doing homework and doing dishes.

Physical Setting

The drawings can be classified as objects and people floating in space (n=22), one or two elements representing a physical setting included to ground the subject matter (i.e. a sun, a piece of furniture, a patch of grass) (n=37), and elaborate drawings of scenes where the entire page is filled with a unified drawing (n=9). Three of the children included a frontal view of their house, represented by a pentagon shaped object with doors, windows and a chimney, that does not realistically depict the majority of houses in Montreal's suburbs, but obviously represents the child's home. The action in the drawing was represented either through a window, or in front of the house, but the house itself is the main feature of the drawings (see Figure 5).

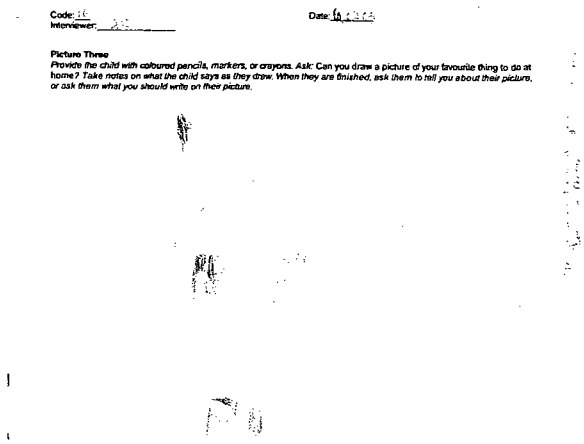

Figure 5. Drawing of house, "playing school with my sister."

Size and Contour

The drawings ranged from simple stick figures to elaborate, detailed depictions of people and objects. Very few children made attempts at reproducing a three-dimensional perspective, for example by drawing objects in the background smaller than objects in the foreground, or drawing a chair and table as one would view them from the side. The majority of children drew objects facing the viewer, but some included elements such as a line on the bottom of the page to represent grass or snow, or the mixture of bird's eye view perspective with forward-facing perspective, for example by drawing a table as a rectangle with four legs sticking out, or a ceiling fan as one would see if one were one to lie down on the floor, but placing a person standing next to it, facing the viewer (see Figure 6). According to

current research on the subject, children begin to develop an awareness of spatial projects around age seven, before that they draw what they know, not what they see (Lange-Küttner, 2008). There did not seem to be any relation between children's drawing complexity and their choice of subject matter.

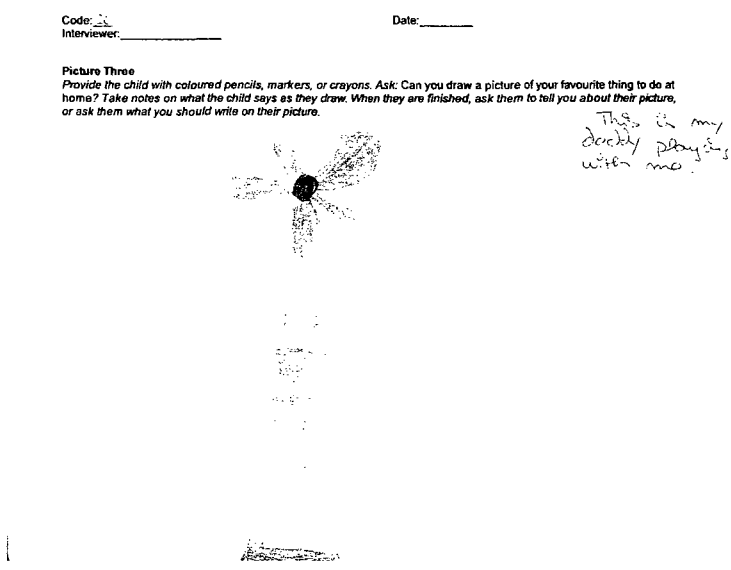

Figure 6. Drawing from multiple view-points.

Choice of Colour

Children were provided with at least eight different colours of pencils or markers, and often up to 24 colour choices. Thirteen children drew monochromatic drawings, 46 used at least four colours, six children used two or three different colours, and two chose instead to use pencils, blue or black ballpoint pen, and pink

or yellow highlighters. Children's use of colour in drawings appears to be related both to their own colour preferences, as well as to the emotional response they have to the subject matter (Burkitt, 2008). No information was collected about children's favourite colours, but it is interesting to note that the most colourful pictures depicted outdoor play and pet play, as well as pictures of siblings, and houses. In fact, all the outdoor play scenes, except one, used at least four different colours, as did all the pet play pictures. The monochromatic images often represented indoor play, with toys, videogames, the computer, and watching television, although a smaller number of drawings of these activities did use many colours. It is also important to note that girls' drawings often, but not always, included more colours than boys' drawings.

Placement of People and Objects

All of the drawings that included one person were self-portraits. Of those drawings that included more than one person, the majority (n=14) included two people, both facing forward and smiling. Usually the people were placed with some distance between them, ranging from a few millimetres to about ten centimetres. Even those children who depicted people engaged in activities, such as cycling and washing dishes, where the bodies were positioned sideways, did not draw faces in profile, but facing the viewer (See Figure 7). One child drew four children, all of whom were facing forward in this way. Seven of the drawings depicted some relationship or interaction between people. This was achieved through an attempt to draw profile by giving each person only one eye, as if they were looking at one

another (n=5)(see Figure 8). Only two children drew people touching one another, and both drawings depicted rough and tumble play. One drawing, of a child pulling her younger brother on a sled, involved a series of ropes apparently attaching the two children. In comparison, two out of the four pet drawings included children touching a dog.

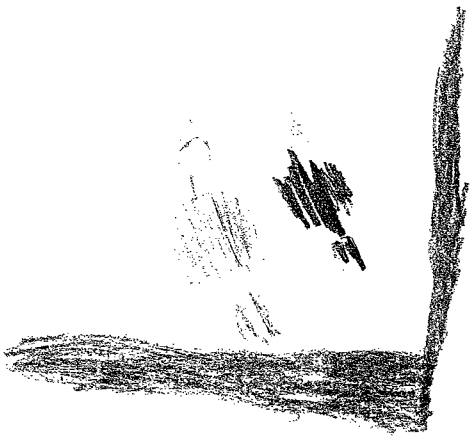

Figure 7. People facing forward.

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Interviewer:_____

Picture Three
Provide the child with coloured pencils, markers, or crayons. Ask: Can you draw a picture of your favourite thing to do at home? *Take notes on what the child says as they draw. When they are finished, ask them to tell you about their picture, or ask them what you should write on their picture.*

playing Lego

Figure 8. People facing each other.

Children who drew themselves playing videogames often portrayed the cord that attached the unit in the child's hand to the television set (see Figure 9). Drawings of children on the computer almost always positioned the child in front of the computer, with the back of their head facing the viewer. Drawings of children with their toys were most often drawings of children sitting next to their toy.

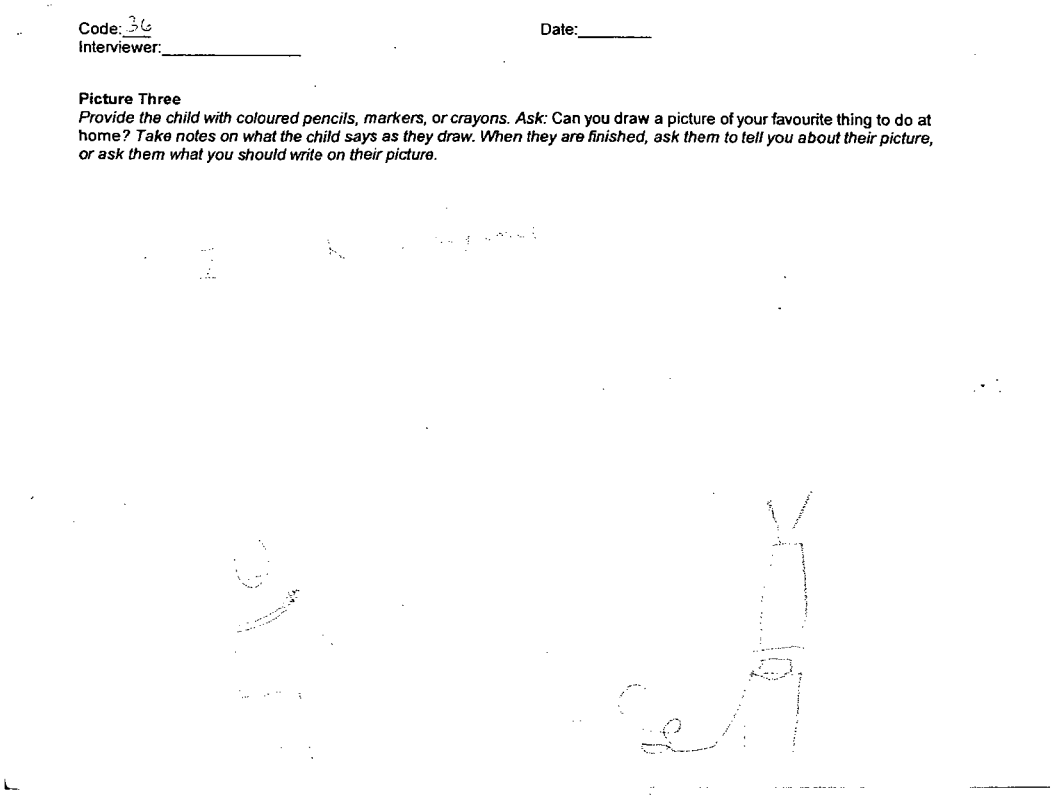


Figure 9. Videogame cord.

Holistic Child Data

Comparison of Parent and Child Perspectives of Play Preferences

When examining parental and child perspectives of preferred play activities, it became apparent that a number of activities were reported more often by children, while others were mentioned more frequently by parents. For example, in response to the question, *What does your child enjoy doing most of the time after school? Does he/she have any favourite activities?* parents mentioned play and non-play activities, such as helping parents, eating snack, and following the daily routine,

and structured activities such as karate class and going to daycare. Children, in answering a similar question about their favourite thing to do at home (see above), also mentioned play activities, and seemed more likely to report television, videogames, and computer, as well as playing with their pet dog or cat.

In comparing the first three activities mentioned by each parent with the first three activities mentioned by their child, it is interesting to note that only one (out of 52) parent-child pair mentioned all the same activities, two mentioned two activities in common, sixteen mentioned one activity in common, and the majority of parents and their children (n=33) mentioned a completely different set of activities. Sometimes, it seemed possible that parents and children were labelling the same activities differently, for example when one mother mentioned play with friends outside while the child stated that he enjoyed wrestling with his friend, or when the parent wrote that the child liked Lego and the child explained that he played Lego videogames on his computer. However, it is worth noting that parents seemed to report less of the activities they identified as problematic or that they limit, such as media use, particularly videogames, as well as rough and tumble play. Almost half of both parents and children listed a social context, such as play with friends, siblings, parents, or alone, as favourite activities.

Vignettes

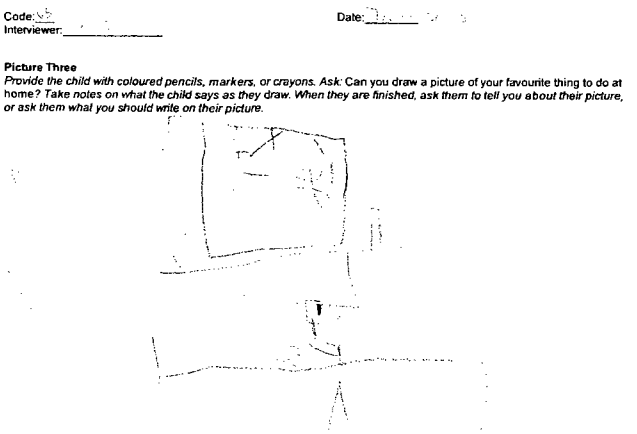
The following three vignettes represent three typical children and their parents, and are presented in order to illustrate the data.

Child 1. Child one was born in June, making him one of the youngest children in the sample. His mother described his ethnic background as English Canadian. He lived with his younger sister who was two-years-old at the time of data collection, and both his parents. His mother worked part-time as the director of a daycare, and his father worked full-time as a senior Asian buyer. Child one's mother was an active volunteer in his classroom, which was located in one of the more affluent schools in the study.

Child one drew a picture of himself playing a videogame that appears to include sword fighting (See Figure 10), and reported that he gets to play videogames "sometimes." He explained that he also likes to play hockey and soccer, and play with his friends. He reported that his favourite place to play was at his friend's house, where they had a better console videogame (Playstation) than at his house (Wii). He also said that he enjoys playing soccer with his father in the summer, likes to play with his sibling "a little bit," does not play with any neighbours, and sometimes likes to play by himself.

His mom complained that the school gave too much homework, but was able to identify his two favourite activities as "playing Wii and outside." She believed that "play is an essential part of all developmental areas," and furthermore, that "play is learning!" She explained that she and her husband encouraged "active social play, although we feel it is also important for him to develop and create his own play." Finally, she explained that, "anything containing violence is discouraged because we feel that it will bring on only negative behaviour."

Although it seems like there is a conflict between parent and child based on the content of the videogame, to this child, videogame play seems to have a social component. The parent seemed aware of her son's preferred activities, and he seemed to be aware of the limits to his videogame play. It is also worth noting that the parents encouraged "active social play," and the child mentioned both friends and sports. In addition, the mother's professional experience may have been a factor in her equation of play and learning. Finally, the large age gap between child one and his sister may explain why he only liked to play with her "a little bit."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Interviewer:
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Picture Three
Provide the child with coloured pencils, markers, or crayons. Ask: Can you draw a picture of your favourite thing to do at home? *Take notes on what the child says as they draw. When they are finished, ask them to tell you about their picture, or ask them what you should write on their picture.*

Figure 10. Child one's drawing.

Child 2. Child two is also a boy, and was also described as English Canadian. He was born in March, making him among the middle of the sample in terms of age. He lived with both parents and his five-year-old sister. His mother described herself as a personal trainer who was not working by choice, and described the father as a high school teacher working full-time. Both parents spoke English at home. Child two attended a different school, but also one located in an affluent suburb.

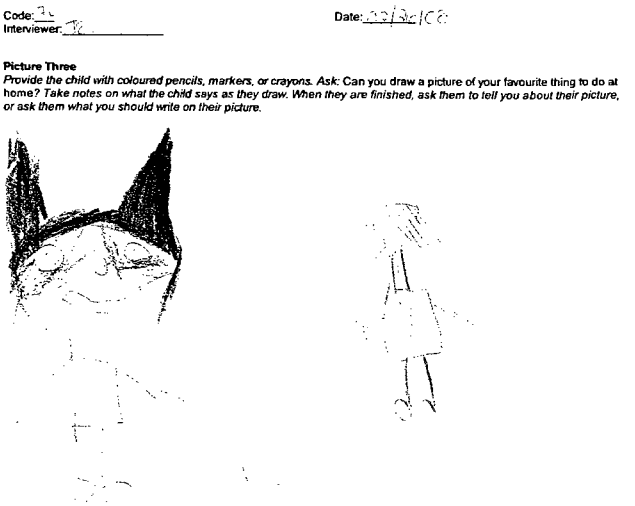
Child two drew a picture of a blond girl dressed in pink, looking at a much larger figure wearing what appears to be a Batman costume (see Figure 11). Child two reported that his favourite out of school activity was playing Batman with his sister, which he said he does on weekends and "early mornings once I get dressed for school." He explained that playing this way "makes me feel strong and fierce," and that his sister always plays Catwoman or Poison Ivy. He recounted that he also has an electric train he enjoys playing with, but " I don't get to play with it often." When asked whom he liked to play with outside of school, he named three (male) friends, as well as his sister. He also reported that he liked to watch a television show called "How it's made," and reported that he liked to play "inside." He said he liked to play with his friends, but, "I don't get to play with neighbours. I play with the neighbour's dog." He also said he enjoyed playing with his parents, and alone "sometimes."

Child two's mother complained that, "many of my son's friends stay in the after school program so there are not many kids for him to play with after school. I wish that could change. More kids in the neighbourhood would be nice." She reported being happy and proud of her son's participation in the scouts program

(Beavers), and that "I like that we are flexible in our routine after school. I like it that my son can play by himself after school sometimes." She listed his favourite activities as "play with his cars or dinosaurs in creative play." She believed play was important for leisure and fun, and that "we all need to play at some point." The social nature of play seemed to be important to her, as she explained, "We like him to play with board games, cards, free play with cars or dinosaurs. We encourage make believe like a treasure hunt. Why we don't want him sitting in front of the TV or computer for long periods of time. I prefer these types of games so we can play together." She also explained that she and her husband discouraged war games and violent games, because "we don't like violence and don't want him engaging in these types of games." She also lamented the lack of time for play in her families' daily life, "We seem to not have enough time for free play. The only thing that seems to be the problem is wasting time. After coming home we spend time emptying the school bag, and little things. Then before you know it, it is time for homework and dinner. This is something we need to work on."

For child two, his sister seems to figure largely in his play experience, even if she was portrayed as much smaller than himself in the picture, perhaps depicting the older brother/younger sister power dynamic, especially given that the game is called Batman, and he is always Batman. His description of his emotions during the activity also seemed to assert his leadership role in the play. His mother's stress on the importance of playing together may be a factor in the inclusion of his younger sister in his play. The mother's concern that there is not enough time for play does not seem to be shared by the child, but could explain why she listed different

activities than he does. It is possible that she is busy "wasting time" with "little things" in the morning while her children are playing. Given his mother's declaration that she wants the whole family to "play together," and her complaint about not enough time for play, it is important to point out that, unlike many other children in the study, this boy did not report his parents not playing with him. Although he did not identify them when asked with whom he likes to play, he responded yes when probed about whether he liked playing with his parents. This raises questions about the role of parents in children's play, both as playmates and as supervisors, and the (both positive and negative) impact of unsupervised play.


Code:
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Date:
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Figure 11. Child two's drawing.

Child 3. Child three was born in May. His mother described him as Italian Canadian. He was the youngest in his family, with two older siblings, an eleven-year-old brother and a fourteen-year-old sister. He lived with both his parents, and attended a school in a less privileged neighbourhood. His mother worked full-time as a special education technician, and his father worked full-time as the president of a company.

Child three drew a picture of himself on a sled, sliding down a slope, and explained how he went over jumps and knocked down trees with some enthusiasm (see Figure 12). He explained that his favourite activity was playing outside, but that he also liked playing computer, and playing with his cars. He said he liked to play "in my room," and that he "sometimes" liked to play with his parents. He also recounted that "my sister doesn't like to play with me," "my neighbour is my friend," and that he enjoyed playing by himself. He answered "not really" when asked if there was anyone he liked to spend time with after school or on weekends, and "yes" when asked with whom he liked to play.

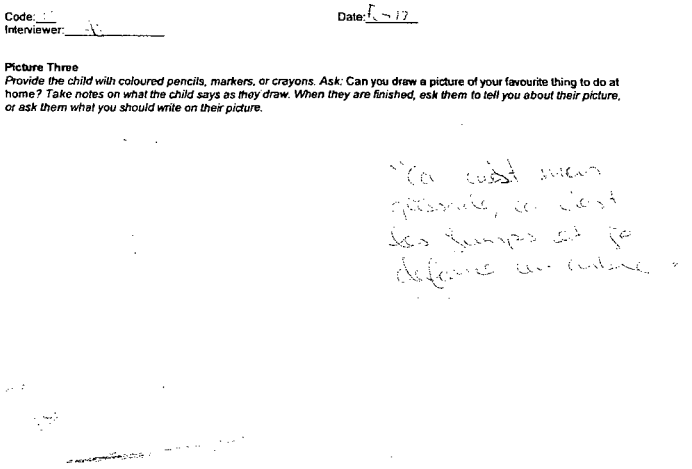
Child three's mother explained that the pressure to have homework completed on specific nights added to her daily stress, and that "there are evenings that may be smoother than others." She also explained that, "I am pleased we prioritize family time rather than socializing with friends on weekdays. I am also proud that my children eat a well balanced meal (for supper) on a daily basis." She listed skating and soccer lessons, as well as "educational videogames such as Nintendo DS" and "children's television programs or Disney movies" as her son's favourite after school activities.

In explaining her beliefs about the importance of play in her child's development, she wrote, "Play is definitely an important part of childhood. I also believe it is a natural way for parents (as myself) to bond with their child as well as with other children/peers. Children's interpersonal and social skills develop as well as their imagination and creativity - thus enhances their "thinking" and cooperative skills as well." She continued, "All types of play (alone, with peer(s), or adults) enhance their overall childhood development skills (social, emotional, cognitive). Engaging in physical activities, bringing play outdoors or simply doing a typical child's activity promotes a healthier and happier childhood." She seemed to struggle with the delineation between rough and tumble play and aggression, as she explained, "Personally, I disagree with wrestling being called a sport. Rough and tumble play is a normal type of play seen more often in boy gender, however, aggressive physical behaviour is another issue altogether."

It is interesting that this mother seemed to have so many positive things to say about children's play, and yet listed structured activities, videogames, and television as her child's favourites activities, especially as he listed playing outside and playing with cars, as well as videogames (on the computer, not the Nintendo as his mother had written). She also seemed to be under some time pressure, as she complained about homework and mentioned the healthy meals as a personal accomplishment.

Although he mentioned playing with his neighbour, this child seemed to stress the activities more than the social context of his play, and seemed to blame his sister for the fact that the two siblings did not play together. It is interesting that

the mother did not mention either sibling, but stressed the importance of play in developing relationships. It is also interesting that child three did not mention his brother at all in the interview, or include him in the picture. During another interview, in response to the question *who helps you with school?*, child three drew a picture of his brother and explained that he helped him do his homework. Child three drew only one person, himself, in this picture. In the context of Quebec society, it is unlikely that a six- or seven-year-old child would have engaged in an outdoor winter sport like tobogganing on his own. This further supports the idea that the play is more important to this child than the social interaction he derives from it.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Interviewer:
Date:

Picture Three

Provide the child with coloured pencils, markers, or crayons. Ask: Can you draw a picture of your favourite thing to do at home? *Take notes on what the child says as they draw. When they are finished, ask them to tell you about their picture, or ask them what you should write on their picture.*

Figure 12. Child three's drawing.

CHAPTER 6 - MIXED METHODS ANALYSIS AND FINDINGS

Integrated Analysis

Tashakkori and Creswell (2007), in the introductory editorial to the first issue of the *Journal of Mixed Methods Research*, discussed the concept of integration in mixed research methodology. These authors suggested that though researchers may use both quantitative and qualitative research methods at any stage of the research process, integration of the two is necessary, in order for mixed methods to be considered a methodology. They also suggested that mixed methodology, when properly integrated, can "provide better findings....than using either qualitative or quantitative methods alone" (Tashakkori & Creswell, pp. 4-5).

In an effort to investigate the relationship between the qualitative and quantitative data in this study, and answer the fifth research question, *Do parent and child beliefs about out of school play explain the relationship between time spent playing outside of school and children's creativity, cognitive, social, and emotional outcomes in school?* the following mixed methods analyses were undertaken.

As the quantitative analyses revealed predictive relationships related to all three outcome measures, parent and child data qualitative data was examined separately for a subset of children who obtained extreme academic, behavioural, and creativity scores, either high or low. The academic and behavioural analysis was done together, due to the high correlations between report card grades and BASC scores (see chapter 4). The creativity analysis was done separately.

In the first mixed methods analysis, each child's complete data set was examined, and two subsets of children were formed, those who were at-risk for either social-emotional or academic difficulties at school, and those who were not. In order to highlight difference, only children who did not score in the clinical range in any of the BASC subscales, and who had math and language grades over 80% (n=15) were compared with children who either scored below 60% in math or language, and/or who were rated by their teacher in at least one BASC subscale as within the clinical range (n=10).

Child and parent qualitative data was examined for the children in both groups, in an effort to determine whether any patterns or themes emerged in parental attitudes about, or child perceptions of, out of school play, based on academic and behavioural outcomes at school. The purpose of this investigation was to determine whether parental attitudes and child perceptions were able to explain the correlation and regression analyses in more depth.

As the creativity scores were not related to academic and behavioural outcomes (except for a moderate correlation between internalizing problems and imagination, see Chapter 4), a similar analysis was carried out between those children whose TCAM scores were more than one standard deviation above (n=12) and below the mean (n=8). As TCAM norms were not available for children aged six and seven (see Chapter 7), these children represent extreme scores for this sample.

In addition, similar analyses were carried out for the two predictor variables which not only were found to be predictive in nature, but were also found to correlate with more than one outcome variable (see chapter 4). Both free choice in

the afternoon and watching others play were related to two different types of outcome measures. Total choice was positively associated with BASC scores and report card grades. Watching others play was positively associated with BASC scores and TCAM scores (see chapter 4). Therefore, children whose parents reported they had less than 30 minutes of total choice in the afternoon (n=5) were compared to those who parents reported they had more than 90 minutes of total choice (n=14). Finally, the qualitative data of those children whose parents reported any time watching others play (n=7), were reviewed, to see if any commonalities were found.

It is important to keep in mind, that the parent-child relationship is bidirectional (Bronfenbrenner, 2005). Although parent's actions and beliefs have an impact on children's outcomes, children's characteristics and personalities also have an impact on parent's actions and beliefs. These findings are not intended to be causal in any way.

Findings

Academic and Behavioural

There were ten children who were deemed at-risk because they had low math and language grades and/or a clinical result in at least one of the five BASC subscales. Fifteen children had both high math and language grades and non-clinical results in all five of the BASC subscales.

Parental Attitudes

Parents want more play. Three out of ten parents of children identified as at-risk for academic or behavioural difficulty, and eight out of fifteen parents of children identified as high achieving in school, indicated that they wished their children had more opportunities for play. One of the parents in the at-risk group wrote, "I wish my child had more play time." The other two parents mentioned specifically that they wished they had more time to play with their children. Of the children in the high achieving group, two parents indicated that they wished they had more time to play with their children, while six indicated they wished their child had more playdates with school friends or neighbours their age to play with. One of those parents also indicated that she and her husband prioritized playing with their children, " Lately we've tried to make more effort to spend time/play (in unstructured ways)/'be goofy,' with all 3 of our children - they seem to enjoy it and are more affectionate w/us (my husband and I)."

Parental involvement in regulating play. When parents were asked to describe particular types of play they encouraged and supported, all of the parents of children in the high achieving group, and the majority of the parents in the at-risk group, listed a number of activities or social contexts. For example, outdoor play, creative play, and puzzles. However, two of the parents of the children identified as at-risk reported that there were no specific activities they promoted, and one of those parents also reported not prohibiting or limiting any play activities.

Routines. When asked if there was anything they would like to change about how their child spends his/her time after school, two of the parents of at-risk

children wrote that they wished they could establish a routine at home, and none of them mentioned being proud of their daily routine. In contrast, seven out of fifteen of the high achieving group expressed pride in their daily routine, and none of them expressed the desire for more structure in their daily lives.

Child Perceptions

Activities. There did not seem to be any patterns in the types of activities children reported enjoying after school and on weekends. Children in both groups mentioned playing outside, playing with siblings, playing with pets, playing with toys, video games and computer, and watching television.

Social Contexts. Children's perceptions of social contexts, on the other hand, did seem to differ based on the child's level of success at school. Two of the children who were struggling complained that their parents did not play with them. For example, when asked if she liked to play with her parents, one girl responded, "Yeah, if they say yes, if they want to play with me." Two others reported that they did not like to play with their parents. Two of these children reported sibling conflict. The other six children answered in the affirmative when asked directly if they liked to play with their parents.

Children whose grades and BASC scores indicated above average achievement at school, on the other hand, were more likely to mention play with parents when asked general questions about what they liked to do after school (n=6). One girl, in response to the question, *What kinds of things do you like to play when you are not at school?* answered, "Well, I do like playing with my mom in the

snow. She's the giant, I'm a little elf. I'm trying to push her so I can climb on her but she's pushing me back." Others answered in the affirmative when asked if they like to play with their parents (n=3). Of the three who reported that their parents were often too busy to play with them, the children still phrased their answers positively by stating that they did like to play with their parents when they had the opportunity. Some of these children also differentiated between their mother and father, for example, "Not really because they don't always have time, except my dad who has lots of time." In fact, only one child reported playing with her mother, while four children reported playing with their fathers, two reported playing with both their mother and father, and six did not differentiate, but answered in the affirmative when asked if they liked to play with their parents. Only two out of fifteen high achieving children reported that they did not like to play with their parents, as compared to four out of ten at-risk children.

Three of the children in the high achieving group reported sibling conflict as an explanation of why they did not enjoy playing with their sibling(s), or that their sibling(s) refused to play with them. Two complained that friends were not allowed to come over or they were not allowed to go to friends' houses, and one explained that she couldn't play outside as much as she wanted to because she had to come in and do homework, "I know my dad will say 'don't stay long outside cuz you have to do your homework' and sometimes he says that but I stay outside as long as I can."

Refusal to complete interview. Three of the at-risk children, and none of the children in the high achieving group, stopped answering questions midway through the interview and refused to continue.

Creativity

Thirteen of the participants in the study scored above one standard deviation above the mean on at least one of the TCAM subscales, while nine scored below one standard deviation below the mean on at least one of the TCAM subscales. However, one of those children scored very low on the fluency scale and very high on the imagination scale. Therefore, she was excluded from this analysis. All but one of the children who scored lower on the creative task fell into the high achieving group. The eighth child had average marks and non-clinical BASC scores. Of the children with high scores on the creative task, all had non-clinical BASC scores and average school grades. The one child with a low fluency scores and high imagination scores had both clinical BASC scores and math and language grades below 60%.

Parental Attitudes

Creative development. Six out of eight parents of the children who scored lower on the creative task, when asked if play was important for their child, mentioned creativity or imagination as one of the main reasons. Parents reported, for example, that play "teaches creativity," and "develops imagination." In contrast, only one of twelve parents in the high creativity group linked play to the development of creativity.

Play opportunities. Six of the nine parents of children in the low creativity group reported that they wished their children had more opportunities to play with neighbours or with friends from school. None of the parents of more creative

children reported such a desire, though two of them wrote that they wished their child had more unstructured playtime after school.

Homework. Four parents of children in the high creativity group reported that the school sent too much homework. Only one parent in the low creativity group reported too much homework, but two parents reported being proud of how well their child completed the homework, "I am proud of how he arranges his time between studying and playing and never nags about how much homework he has," and one reported that she used play as a reward for completing homework, "I think by allowing some playtime after homework makes it easy for him to sit and do homework."

Child Perceptions

Activities. Three of the children in the high creativity group, and none of the children in the low creativity group, mentioned playing on trampolines, "I feel lucky cuz my mom and dad come outside and play with me on my trampoline." Three of the children in the high creativity group mentioned playing with their dogs, as a positive experience. Only one of the children in the low creativity group mentioned his dog, and this was in response to the question, *what do you like to play?,* to which he answered "I don't know, I only play with my dog." Three of the children in the low creativity group mentioned Star Wars toys, movies, or videogames, while none of the more creative children did. These were the only activities that seemed to be more prominent in one group or the other. The other children in both groups

mentioned various activities, such as riding bicycles, playing with Lego, and playing soccer.

Social Contexts. Four of the children in the high creativity group complained that their parents do not play with them enough, "they never play because my parents are too busy," compared to only one of the children in the low creativity group. One of the children in the high creativity group stated that he had moved and no longer has neighbours to play with, while one of the children in the low creativity group explained that, "I play at my neighbours a little, but my best neighbour is gone. I don't know the new neighbour," and another stated that, "I can't play with my neighbours, one doesn't like me, the other is too old." In addition, one of the children in the low creativity group complained that he was never permitted to play outside, "Yeah, but I don't play outside. My mom says I have to stay in," and another reported not going to friends' houses as often as she would like.

It must be noted, however, that the TCAM, as discussed in chapter 7, was not normed for children in Grade One, and that the scoring procedures had not been updated in over 25 years, Therefore, these findings should be interpreted with caution.

Total Choice

Five parents in the entire sample reported that their child spent less than 30 minutes engaged in an activity of their own choice during the afternoon and evening. Fourteen of the parents reported that their child spent time in an activity of their own choice for more than 90 minutes. As total choice was related to both BASC and report card scores, these two groups were compared, to see if parental attitudes

towards their child's use of time was different based on how much free time they reported, and to see if children's reports reflected any difference in perception of play time.

Parental Attitudes

Routines. Two out of five parents who reported less choice time mentioned being pleased with their afternoon and evening routine in general, "my child is well established in his routine so it makes for a lot of time for activities." Parents who reported that their child engaged in more than 90 minutes of free time spoke about more specific routines, such as homework routine (n=1), bedtime routine (n=1), and morning routine (n=2). Although one said that "I would not change a thing. We have a great after school routine," one wished she had a better routine for herself, one wished her son would follow a more structured routine, and one reported being pleased that her daily routine was flexible.

More play. One parent whose child spent less than 30 minutes in free choice reported that she wanted more time to play with her son and another mentioned that she wished her son had more friends to play with. Four of the fourteen parents who reported more free choice wished their children had more friends to play with, one reported wishing she had more time to play with her child, and one reporting wishing her child would play alone more often. Two of the parents who reported more choice also reported spending a significant amount of time "together as a family," and two reported being pleased that their child plays so well with their siblings. One parent in the high free choice group expressed that she felt "too many

children don't have unstructured play," and another wrote, "I think children need more play time at school. Recess is too short and 55 min for lunch and play isn't enough."

Chores. None of the parents who reported less total choice time, and two of the parents who reported more total choice time, indicated that their child spent time helping their family with chores. For example, "he loves to help with supper prep. He often pretends he is a chef."

Child Perceptions

Siblings. The only difference between children whose parents reported more choice time and children whose parents reported less choice time was children's reports of play with siblings. Four out of five children, whose parents reported that they spent less than 30 minutes in an activity of their own choice, reported that they did not enjoy playing with their siblings. For example, in response to the question, *do you like to play with your brothers or sisters?,* one boy reported, "my brother, not so much," and another explained that he likes playing with only one of his three sisters. In contrast, eleven out of fourteen children whose parents reported more than 90 minutes in an activity of their own choice, talked about their siblings in response to other questions. Three of them included their sibling in their drawing, others mentioned their siblings when asked with whom they liked to spend time, with whom they liked to play, and what they liked to play or do after school. Their responses to the direct question of whether or not they enjoyed playing with siblings were also more enthusiastic, for example, "I really do like to play with them!"

Watching others play

Only seven out of 56 parents reported that their children spent any time watching other children play. These children spent more time playing in total (mean = 4.32, more than 90 minutes) than the sample mean (3.33). They spent more time playing in all social contexts (with friends, parents, siblings, and alone) than the mean for the entire sample.

Parental Attitudes

The common feature among most of these parents (n=6), was a belief in the social nature of play. These parents believed that play was vital to their child's social development, and reported that they encouraged play, such as "group games, some that show her that she needs to accept friends' ideas," "active play and board games," and "outside for...social purposes."

Child Perceptions

Despite parental reports of the importance of social development, these children did not seem to share any common beliefs or attitudes. Three out of seven reported that they enjoyed playing with siblings, three reported that they enjoyed playing with friends, and two reported that they enjoyed playing with parents. The other three said they would like to play with their parents, but their parents are often unavailable, or "they don't really play with me, they do some other stuff." One child drew a picture of herself doing homework, while another reported that, "I don't like doing a lot of homework, not getting to play."

CHAPTER 7 – DISCUSSION AND CONCLUSIONS

The purpose of this study was to explore the out of school play of grade one children in suburban Montreal, and its relationship to their school-based academic, social, emotional, and creativity outcomes, from multiple perspectives. The following questions were investigated: (a) to identify how six- and seven-year-old children spend their out of school play time; (b) to determine whether out of school play predicts grade one children's cognitive, social, emotional or creativity outcomes at school; (c) to describe parental and child beliefs about play at this age level; and (d) to explore whether parental and child beliefs explain children's out of school time use, or the relationship between out of school play and school-based outcomes.

Research Question 1

How do grade one children spend their out of school playtime? What activities do they engage in? With whom do they play? Where do they play?

Grade One Children's Play

Contrary to those who claim that children's play is endangered (e.g., Bezaire, 2008; Laumann, 2006; Louv, 2005), this study found that grade one children in suburban Canada spent an average of one to two hours playing after school each day, and furthermore, that active physical play was the most common form of play. Parents also reported that their children spent time in pretend play, creative play, and constructive play, and to a lesser extent in rough and tumble play, videogame

play, play with commercial toys, music and singing play, board game and puzzle play, and watching others play. Some previous studies have found that children spent more time watching television than playing (Hofferth & Jankuniene, 2001; McHale et al. 2000; Miller & et al., 1995). The results of this study support previous research findings, which have suggested that school-age children spend the majority of their free time playing (e.g., Lareau, 2000; Newman et al., 2003; Tudge et al, 2001/2006). In addition, this study adds more descriptive detail in terms of defining the different types of play activities that children engaged in at home, as they transitioned to formal schooling.

The Role of Siblings

This study found that children spent more time playing with siblings than either parents, friends, or alone. It is interesting to note that the number of siblings a child had did not relate to any of the other variables, for example total amount of play, or any of the specific play activities, except total play with siblings. This finding is in contrast to the research reported by Hofferth & Sandberg (2001), who found that children with a greater number of siblings spent more time playing. In addition, the amount of playtime with siblings did not relate to any of the outcome variables, nor did the amount of playtime with siblings negatively associate with either play with parents, with friends, or alone.

Play with Parents

Parents reported that they spent up to an hour, on average, playing with their child, in one afternoon/evening. However, both parents and children reported

desiring more time for play together. Some parents, particularly those who felt they worked too many hours, and whose children spent more time in after school care, were concerned that they did not have enough time to play with their children. Almost half the children reported that they enjoyed playing with their parents, but that their parents were often unavailable. However, some parents indicated that they prioritized playing together as a family, or that they encouraged their children to participate in games and activities that they enjoyed themselves, so they could play with their children.

Previous research has explored parent-child play from the parent's perspective, and has found both cultural and gender-based differences in parental play styles and preferences (Farver & Howes, 1993; Haight, Parke, & Black, 1997; Parmar et al., 2004). This body of research has also found that parents often prefer activities they view as educational, such as reading and teaching the alphabet, to activities they view as ludic (Galboda-Liyonage, Scott, & Price, 2003; Haight, Parke, & Black, 1997; Tubbs, Roy, & Burton, 2005). However, this study also examined parent-child play from the child's perspective, providing a new contribution to the research on children's play.

Play with Friends

Only 32% of parents reported that their child spent time playing with a friend on the day the DAQ was completed. Both parents and children expressed a desire for more play opportunities with friends after school. Some children reported that they were not allowed to invite children over or play at friends' houses as often as they would like. Parents reported wishing their child had more neighbourhood

friends to play with on a regular basis, and that the child was invited to friends' homes more frequently.

Play Alone

The majority of parents (60%) reported that their child spent some time playing alone. Approximately half the children reported that they enjoyed spending time alone, while others reported playing alone only when their siblings, friends, and parents were unavailable.

Outdoor Play

This study found that children engaged in active physical play both indoors and out, while the majority of other play activities took place indoors, during the Spring, in Quebec. Previous research has found that parental perception of neighbourhood quality is related to children's physical activity levels (Beets, 2008), and that providing safe outdoor play spaces increases children's physical activity levels (Farley et al., 2007). The children in this study lived in suburban areas, and reported playing in parks, yards, and other outdoor play areas. This access may explain why so much of their playtime was spent in active physical play.

Research Question 2

Does time spent in unstructured play outside of school predict grade one children's creativity, cognitive, social, or emotional outcomes in school?

The results of this study indicated that watching others play, and play with commercial toys, were the only types of play to have predictive relationships with children's school-based outcomes. However, free time in the morning, and the

amount of total choice a child had in the afternoon/evening, was also predictive of school grades and behaviour. The only other study to have examined the relationship between particular types of play and school-based outcomes was McHale and colleagues (2001), who found a negative association between outdoor play and school grades for ten-year-olds.

Watching others play

Low correlations were revealed between time spent watching other children play and the BASC adaptive skills subscale as well as the fluency and originality subscales of the TCAM. Watching others play was also found to have a predictive relationship with adaptive skills in school. It is important to note that only 7 (13.7%) out of 51 parents reported that their child engaged in any time watching others play. However, it is possible that, children who spent more time watching were more observant in general, and that it is this trait that is linked to better adaptive skills and creativity scores in school. This result stands in contrast to Rubin's (1977) theoretical position, in which he labelled onlooker play a form of immature behaviour. In addition, at this age (6-7), children may watch others play to figure out how to join the play or how to develop new skills to improve their ability to play (for example, with sports). However, it is interesting to note that neither parents nor children mentioned anything about observing play in the interviews or questionnaires.

Play with commercial toys

Low correlations were found between play with commercial toys and the fluency and originality subscales of the TCAM. In addition, a predictive relationship was found between play with commercial toys and TCAM originality scores. Commercial toys are often banned from schools and childcare centres, although children reported these as favourite toys (Hartmann & Brougère, 2004). Given that time spent in dramatic or pretend play did not relate to any of the outcome measures, it is possible that the element of choice is also a factor here. In addition, commercial toys may be linked to both unsupervised peer culture and media and popular culture for school-aged children.

Free Time in the morning and free choice in the afternoon/evening

This study revealed low correlations between free time before school and report card language and math grades. Results also revealed low association between free choice in the afternoon and report card language grades, adaptive skills and decreased school problems . In addition, total choice time appeared to predict report card language grades, adaptive skills and decreased school problems.

Although only a small amount of variance is explained by these correlations and regressions, the fact that these relationships were significant, while total amount of play time, as well as the most popular forms of play (active physical play, pretend play, creative play, rough and tumble play) did not correlate with any of the outcome variables, is an important finding. Contrary to theorists and play training research which links play directly with learning and social development (i.e.,

Bredekamp & Copple, 1997; Bruner, 1972; Piaget, 1962; Smilansky, 1968), this research seems to support the more post-modern viewpoint that there is no universal or simple truth that can explain the way in which play is related to individual children's school grades, school behaviour, or creativity (Canella, 1997; Yelland & Kilderry, 2005). Different children may need different amounts and different types of play. The results of this study suggest, however, that allowing children the freedom to make choices about how they spend their out of school time may benefit their school performance. These findings also support the conclusions from Fisher's (1992) meta-analysis, suggesting that the link between development and play may be mediated by other factors. With a larger sample, future research may be able to test such a meditational model.

An alternate explanation, with regards to the association between free time in the morning and school grades, may be that early risers have more time to get ready for school and their early morning play or television viewing may be indicative of a better ability to concentrate in school in the mornings. Therefore, research on school age play must consider the contextual factors of children's play, as well as the limits and circumstances that may indirectly influence their choices to play.

Research Question 3

Does time spent playing with parents, friends, siblings or alone predict any of the outcome variables in school?

This study found that play alone and play with parents were associated with school-based outcomes, while play with friends and play with siblings were not.

Play with Parents

Previous research has provided empirical support linking parental play to positive child behavioural outcomes at the preschool level. Macdonald and Parke (1984) found a positive association between paternal physical play and boy's popularity in preschool. Lindsey and Mise (2000) found an association between parent-child pretense play and children's social competence.

In contrast, theorists such as Sutton-Smith (1997) and Louv (2005) tend to lament a supposed decline in unsupervised play, as neighbourhoods have become less safe over the last few decades. This study found that play with parents was positively correlated with the adaptive skills subscale of the BASC.

This result, particularly when contrasted with the findings that more time in child care led to more negative social outcomes in school, seems to indicate that parent-child play can serve a beneficial role in children's social development, and that the benefits of this play can transfer from the home to the school context. Previous investigations have suggested that through parent-child play, parents and children develop dyadic synchrony and mutual understanding, which in turn serves to develop children's social competence (Harrist & Waugh, 2002).

Play Alone

Play alone was negatively associated with creativity as measured on the TCAM fluency subscale. Previous research on solitary play has divided this category

into solitary active and solitary passive play, and found a positive correlation between solitary active play (in classrooms) and creative fluency scores (Lloyd & Howe, 2003). It is unclear whether this study found such different results because the two categories were not differentiated, or whether there are fundamental differences between solitary play at home and solitary play at school. As total amount of play alone was not negatively associated with play in any other social context, it seems as if solitary play itself, and not the lack of social contact, can be linked to the creativity scores. However, it seems possible that less creative children may be more likely to choose to play alone.

Research Question 4

How do parents and children view out of school play at the grade one level?

Parental Beliefs About Play

Parents of school-age children tended to report similar beliefs about the value of play as reported in previous research with parents of preschool children (Farver & Howes, 1993; Fogle & Mendez, 2006; Haight, Parke, & Black, 1997; Parmar et al., 2004; Tubbs, Roy, & Burton, 2005). They explained the importance of play for various domains of development, such as social, emotional, academic, and creativity. They also mentioned play as important for fun, building relationships and self-esteem, relaxation, teaching moral values, and processing emotional experiences. It is important to point out that there was not a single parent who answered in the negative, nor stated that their child had outgrown the need for play.

Parental Regulation of Play

However, when probed, parents did not all support or encourage every type of play that their child wanted to participate in. Although some parents explained that they supported their child's ability to make choices and create their own activities, many parents expressed a preference for active, outdoor play, and sports, as well as pretend play, creative play, board games, and puzzles. These same parents explained that they limited or prohibited television viewing and videogames, violent or aggressive play, and play with sexual themes.

These findings appear to support the theoretical positions of Sutton-Smith (1995/1997) and Canella (1997). Canella argued that adults attempt to regulate and control children's play, suppressing activities they deem inappropriate, aggressive or dangerous, and encouraging activities they consider productive, beneficial, or therapeutic. Sutton-Smith suggested that the notion of play as relating to children's progress and development is but part of the complete picture of the role of play in children's lives. While criticizing Western culture for attempting to sanitize, domesticate, and regulate children's play, he suggested that children's illicit play is an attempt at empowerment and emotional regulation, that children use play to make their present lives tolerable, and that they need unsupervised time in which to do so.

Child Activity Preferences

Children tended to draw and discuss activities that can be classified according to King's (1987) categories of recreational, instrumental, and illicit. They focused on

television and video or computer games, pretend play, active outdoor play and sports, building, playing with toys, drawing, rough and tumble play, and playing with their pets. However, in contrast to school play, where illicit play seems fairly straightforward to identify, children's depictions and descriptions of television viewing, videogame play, and wrestling with friends can only be classified as illicit play if their own parents prohibit or discourage such play. For those children who recounted playing videogames with their fathers, this play is unlikely to be viewed as illicit. Similarly, instrumental play in school is usually organized by a teacher and linked directly to academic or social outcomes. In the home context, pretend play, building with Lego, playing outside, drawing, and many other activities, can be viewed as instrumental, but only if the child's parent(s) view(s) them as such. Other parents may view the same activities as recreational. However, most children answered "good", or "happy", when asked how they felt while engaged in their favourite activity. This seems to indicate that most play at home, at least from the child's perspective, could be classified as recreational, or at least enjoyable.

Pet Play

Questions about pet play were not included in the DAQ or the Child Interview in Pictures and Words. However, children often mentioned, or drew pictures of, playing with their pet dogs and cats. A smaller number of parents also reported play with pets. Research on children and animals has tended to focus on animals used for therapeutic purposes for children in school or clinical counselling situations (Kaufmann, 1997; Parshall, 2003; Tilsen, 1998). Therefore, this finding is of some

significance, as it adds another activity to the list of types of play commonly engaged in by school-aged children.

Research Question 5

Do parent and child beliefs about out of school play explain the relationship between time spent playing outside of school and children's creativity, cognitive, social, and emotional outcomes in school?

School Success

Parents of children in the high-achieving range in school seemed concerned about their children's opportunities to play with friends, while those with children experiencing behavioural or academic difficulty seemed concerned about having enough parent-child play time. Parents of children experiencing difficulty were also less likely to report that they encouraged particular types of play and discouraged others.

In concurrence with parental reports, the children who were high-achieving themselves reported that they enjoyed playing with their parents and siblings, while those experiencing difficulties tended to complain about their parents being unavailable for play. Children who were high achieving did complain about the lack of friends available for play after school.

The statistical analyses revealed that play with parents was positively associated with the adaptive skills subscale of the BASC. This analysis triangulates the finding. The statistical analyses, however, did not reveal any association between play with friends and academic or social outcomes. This finding seems to indicate that the perception of lack of playtime with friends, and not actual lack of

time, may be related to school success. This may be because children who possess strong social skills are more likely to desire contact with peers outside of school.

Creativity

Parents of children with low creativity scores as measured on the TCAM were more likely to believe that play is important for their child's creative development and imagination. It is possible that these parents were aware that their children needed to develop their creativity, and viewed play as an opportunity to address that need.

The quantitative data did not reveal any associations between play with friends and any of the TCAM scores. However, a negative relationship was found between playing alone and TCAM fluency scores. This analysis revealed that parents of children who were less creative wished their children had more play opportunities with friends. These parents could have been concerned about the amount of playtime their children spent alone, and viewed more play with peers as a possible solution.

Previous research on play and creativity has examined either pretend play, play-training, or play as an unspecified group of activities. Only Lloyd and Howe's (2003) study examined different social contexts during play. These authors investigated three levels of solitary play: solitary active, solitary passive, and reticent behaviour. They found a positive relationship between solitary active play and TCAM scores, a negative association between reticent behaviour and TCAM scores, and no significant association between solitary passive play and TCAM scores.

The finding that parents of children who scored lower on the TCAM were more likely to list creativity and imagination as to why play is important for their children does not seem to have been found before, and warrants further investigation.

Child Perceptions

Children in the more creative group were more likely to report that they enjoyed playing on a trampoline and with pets, while children in the less creative group were more likely to say they enjoyed playing with commercial toys, specifically Star Wars toys. This finding directly contradicts the correlation analysis, which found a positive association between play with commercial toys and TCAM fluency and originality scores. A possible relationship between pet play and creativity has not been examined in the literature, as pets have not been studied before in conjunction with children's play. The trampoline finding may be related to other contextual factors, such as having a yard large enough for a trampoline, or parental attention in an outdoor activity that requires supervision for safety purposes. The three children who mentioned Star Wars mentioned different media: a video game, a movie, and action figures. They did not mention any other commercial toys. It may be possible that there is some relationship between the content of the Star Wars media and the low TCAM scores, but as this finding involves only three children, it should be interpreted with caution.

Children who scored lower on the creativity measure reported fewer opportunities to play with friends. This finding corresponded with parents of the same children who reported that they wished their children had more neighbours to

play with or play dates on a more regular basis. In contrast, children rated as more creative described a lack of play opportunities with parents. However, their parents did not report concern that they (the parents) did not have enough time to play with their children. Therefore, it is possible more creative children desire more parent-child play than less creative children, regardless of how much actual parent-child playtime they experience.

Total Choice

Children whose parents reported that they spent less time in activities of their own choosing were more likely to report that they did not enjoy playing with their siblings or that their siblings did not play with them. Children whose parents reported more choice time were more likely to draw pictures of their siblings to express that they enjoyed playing with their siblings with enthusiasm. In addition, they mentioned their siblings when asked with whom they liked to play and what they enjoyed doing. Although play with siblings was the most common social arrangement during play, it did not correlate with any outcome measures. However, this finding suggests that the quality of sibling play may be related to children's perception of their choice, which did correlate positively with academic and social outcomes.

Watching Other Children Play

Parents of children who engaged in onlooker behaviour were likely to report a belief in the social nature of play. Although these parents may encourage and value social relationships, it is also possible that these children tended to be more social

and the parents' explanations of the role of play are based on their observations of how their children interact with others. This finding may help to explain why watching others play was positively associated with creativity and behavioural outcomes.

Limitations of the study

Although this study adds a new perspective and important findings to the literature on children and play, a number of limitations need to be mentioned, and kept in mind when planning future research.

Sample Size

The sample size for this project was both too small and too large. For the quantitative data, a larger sample size would have permitted more sophisticated analyses, and the fact that there were more boys than girls in the sample may have led to some conclusions that are more typical for boys than girls. In addition, some of the parents returned their packages over the summer, rendering their time diary data invalid, as children usually play more when they are not in school. Finally, a number of teachers failed to return their questionnaires, so the sample size of all analyses using the BASC was lower than expected.

The qualitative data relied on individual interviews with children, children's drawings, and parent answers to open-ended questionnaire items. Given the number of participants, and the relatively brief account provided by each participant, this data is somewhat superficial. A more in-depth analysis would have been possible had more qualitative data been collected from fewer participants.

TCAM

The TCAM scoring procedure was published in 1981. Calculating fluency scores involved only counting the number of ideas a child was able to generate. Calculating imagination scores involved assessing the child's ability to pretend. However, originality scores were calculated based on a complicated list of possible items, for each of 3 subtests. Each item was assigned 0, 1, 2, 3, or 4 points, based on how likely a child was to come up with that particular answer. However, in the 27 years since this scoring manual has been published, societal and technological advances have made some answers more or less common today. In addition, the TCAM was never normed for six- and seven-year-olds, so this research relied on raw data. The publisher was contacted, and no updated scoring procedure or norms have been produced as of yet.

DAQ

A number of qualitative results have highlighted ways to improve the Daily Activities Questionnaire. For example, this questionnaire asked about playtime with sibling(s) and parent(s), but did not ask specifically about mothers, fathers, sisters, or brothers. In addition, pet play could be added as a new play category in the future, given the number of children who reported enjoying this type of activity. The DAQ also did not contain specific questions about total time spent in each social context. This information was calculated by adding all the different activities together, and taking into account the answer to the question, *Was your child doing something else at the same time?* in order to determine whether parents reported

the same activity under two different categories (for example, pretend play and play with commercial toys). Where this was difficult to determine, the data was coded as missing. In order to improve the questionnaire, parents can be asked to make the calculation themselves.

In addition, the possible answers for amount of time in each activity were grouped as less than 30 minutes, between 31 and 60 minutes, between 61 and 90 minutes, between 91 and 120 minutes, and more than 120 minutes. Given the difference in play quality and engagement between 5 minutes and 30 minutes, and the fact that some children may spend three or four hours a night engaged in one activity, it may improve the questionnaire to ask parents to provide the total number of minutes, without having to limit themselves to a predetermined category. Previous research used telephone interviews to collect time diary data, and asked participants to list activities, including start and finish times, for the previous 24 hour period (Hofferth & Sandberg, 2001; McHale et al., 2001).

Directions for Future Research

This project, as all research does, has led to more questions than answers. Future research could examine the play beliefs and experiences of fathers in particular, or of fathers as compared to mothers. It would also be interesting to investigate different family types, including the experiences of only children as compared to those with siblings. Research could be conducted on differences in play experiences, and play locations, in urban, rural, and suburban settings. Research could also investigate children's home play in more depth, perhaps including direct observation and/or video recording. Further research could also examine how

choice is negotiated at home, and children's play with pets. Finally, the role of activity choice in classrooms, and its relationship to children's academic and social outcomes, could be explored.

Implications for Policy and Educational Practice

This project provided empirical support for the benefit of child choice in how they spend their out of school time, as well as the importance of parent-child play at the grade one level. This information could be used in a parent education context. Resources designed to train parents to play with their children exist, particularly in therapeutic contexts (i.e., Bratton, Landreth, Kellam & Blackard, 2006; Drewes, 2006; Guerney, 2000). These types of resources could be extended to parents in non-clinical settings, such as schools, in order to encourage parent-child play.

For teachers, an understanding of parent and child beliefs about the value of play could be useful, either for making decisions about the inclusion of play at school, or for making decisions about the amount and type of homework they assign. For example, parent-child play such as board games and other academically relevant play activities could be assigned as homework.

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APPENDICES

a. Summary Protocol Form

b. Parent Information letter

c. Daily Activities Checklist

d. Child Interview in pictures and words

e. Demographic questionnaire

f. TCAM – sample questions

g. BASC – sample questions

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SUMMARY PROTOCOL FORM
UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE

IMPORTANT:

Approval of a *Summary Protocol Form* (SPF) must be issued by the applicable Human Research Ethics Committee prior to beginning any research project using human participants.

Research funds cannot be released until appropriate certification has been obtained.

FOR FACULTY AND STAFF RESEARCH:

Please submit a signed original plus THREE copies of this form to the UHREC c/o the Office of Research, GM-1000. Allow one month for the UHREC to complete the review.

FOR GRADUATE or UNDERGRADUATE STUDENT RESEARCH:

- if your project is included in your supervising faculty member's SPF, no new SPF is required

- if your project is supported by external (e.g. CIHR, FQRSC) or internal (e.g. CASA, FRDP) funds, the supervising faculty member must submit a new SPF on behalf of the student as per faculty research above. The supervising faculty member MUST be listed as the PI.

- if your project is NOT supported by external (e.g. CIHR, FQRSC) or internal (e.g. CASA, FRDP) funds, the student must submit a new SPF to the relevant departmental committee. Contact your department for specific details.

INSTRUCTIONS:

This document is a form-fillable word document. Please open in Microsoft Word, and tab through the sections, clicking on checkboxes and typing your responses. The form will expand to fit your text. Handwritten forms will not be accepted. If you have technical difficulties with this document, you may type your responses and submit them on another sheet. Incomplete or omitted responses may cause delays in the processing of your protocol.

1. SUBMISSION INFORMATION

Please provide the requested contact information in the table below:

Please check ONE of the boxes below :

☒ This application is for a new protocol..

☐ This application is a modification or an update of an existing protocol:
Previous protocol number (s): _____

2. CONTACT INFORMATION

Please provide the requested contact information in the table below:

Principal	Department	Internal	Phone	E-mail

Investigator/ Instructor (must be Concordia faculty or staff member)		Address	Number	
Hariclia (Harriet) Petrakos	Education	LB 578-9	x2013	hpetrakos@education.concordia.ca
Co-Investigators / Collaborators		University / Department		E-mail
Joanne Lehrer		Education		j_lehrer@education.concordia.ca
Research Assistants		Department / Program		E-mail

3. PROJECT AND FUNDING SOURCES

Project Title:	Examining the impact of out of school play on grade one children's creativity and cognitive, social, and emotional development.

In the table below, please list all existing internal and external sources of research funding, and associated information, which will be used to support this project. Please include anticipated start and finish dates for the project(s). Note that for awarded grants, the grant number is REQUIRED. If a grant is an application only, list APPLIED instead.

Funding Source	Project Title	Grant Number	Award Period	
			Start	End
SSHRC	a two-year study of the psycho-social and contextual factors associated with children's early transition to school	501080	2005	2009
SSHRC	Canada Graduate Scholarships Program - Master's Scholarship	766-2007-0585	May 2007	April 2008
FQRSC	Bourse de maîtrise en recherche	122290	May 2008	April 2009

4. BRIEF DESCRIPTION OF RESEARCH OR ACTIVITY

Please provide a brief overall description of the project or research activity. Include a description of the benefits which are likely to be derived from the project. Alternatively, you may attach an existing project description (e.g. from a grant proposal).

It is frequently claimed that how students spend their non-school hours has an impact on their social and academic development (Hofferth & Jankuniene, 2001; Miller, O'Connor & Sirignano, 1995). Although research has been conducted on what children do outside of school (see Ben-Arieh & Ofir, 2002; Larson & Verma, 1999; for an overview), very few studies have examined the relationship between different out-of-school activities and child outcomes (Hofferth & Sandberg, 2001; McHale, Crouter, & Tucker, 2001; Tudge, Tammeveski, Meltsas, Kulakova & Snezhkova, 2001).

Unstructured play is the activity young children most frequently engage in when they have control over their time (Hofferth & Sandberg, 2001; Lareau, 2000; Tudge et al, 2001). Play has been linked to cognitive, social, and emotional development, as well as creativity, in early childhood (e.g., Bredekamp & Copple, 1997; Ginsburg, 2007; Runco, 1996; Tsao, 2002). Yet, there is very little literature that examines the relationship between children's unstructured

play outside of school (in homes, outdoors, in after-school care) and child academic or social outcomes (Fantuzzo & McWayne, 2002; Fogle & Mendez, 2006; Hofferth & Sandberg, 2001; McHale et al, 2001; Parmar, Harkness & Super, 2000; Rescorla, 1991). In addition, studies that relate out-of-school play to child outcomes are most frequently conducted with preschool children, and do not clearly differentiate between different forms of play, or different social arrangements during play.

The purpose of the present study is to determine whether out-of-school play predicts grade one children's cognitive, social, emotional or creativity outcomes, and whether parental beliefs about play at the grade one level are related to children's use of time outside of school. In order to obtain a meaningful understanding of the role of play in the out-of-school lives of grade one children, and whether it has an impact on developmental outcomes, an embedded correlational model mixed methods design will be used. This design features qualitative data embedded within a quantitative design, with the qualititative data serving to explain how the mechanisms work within the correlational model (Creswell & Clark, 2007).

Parents will complete two questionnaires, children will complete a creativity assessment and an interview, teachers will complete one questionnaire, and schools will provide copies of children's report cards.

This project will contribute to knowledge about school age children's out of school time and the relationship between play and child development.

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5. SCHOLARLY REVIEW / MERIT

Has this research been funded by a peer-reviewed granting agency (e.g. CIHR, FQRSC, Hexagram)?

☒ Yes Agency: SSHRC, FQRSC

☐ No If your research is beyond minimal risk, please complete and attach the Scholarly Review Form, available here: http://oor.concordia.ca/REC/forms.shtml

---

6. RESEARCH PARTICIPANTS

a) Please describe the group of people who will participate in this project.

Participants are 100 grade one children from suburban neighbourhoods outside of Montreal, and their parents and teachers. These children attend 6 different schools within 2 English-language school boards.

b) Please describe in detail how participants will be recruited to participate. Please attach to this protocol draft versions of any recruitment advertising, letters, etcetera which will be used.

This study is part of a larger 2-year longitudinal research project on children's transition to school, entitled a two-year study of the psycho-social and contextual factors associated with children's early transition to school. School boards, local school governing boards, families and teachers provided consent for the study in the spring of 2007, while the children were attending Kindergarten. Consent letters were sent home, and parents filled them out and returned them to school.

c) Please describe in detail how participants will be treated throughout the course of the research project. Include a summary of research procedures, and information regarding the training of researchers and assistants. Include sample interview questions, draft questionnaires, etcetera, as appropriate.

For the purpose of this project, a demographic questionnaire and a time diary questionnaire will be sent home with the children (See Appendix A). Parents will complete the questionnaires at their convenience and return them to their child's teacher. Research assistants (including the research collaborator) will conduct the Thinking Creatively in Action and Movement assessment and the child interview in words and pictures individually with the children at their schools in the spring of 2008. The Thinking Creatively assessment is an active procedure in which children move around the classroom, pretending to be trees and animals and attempting to come up with creative used for a paper cup (See Appendix B). The entire procedure takes about 45 minutes, and this will be divided into three 15 minutes sessions with the students, who will each be taken out of class by a research assistant who will conduct the assessment in a private office or empty classroom. The interview is an open-ended discussion in which the children will draw a picture, talk about their picture, and answer questions about what they like to do outside of school (See Appendix C). This should take about 15 minutes. Children will be asked for their oral assent each time they leave their classroom with a research assistant, and the research assistants will cease the session should the children express the desire to do so. Teachers will complete the Behavior Assessment System for Children in the spring of 2008 (see Appendix D). Final grade one report cards will be collected at the end of the school year from the school secretaries.

---

7. INFORMED CONSENT

a) Please describe how you will obtain informed consent from your participants. A copy of your written consent form or your oral consent script must be attached to this protocol. *Please note: written consent forms must follow the format of the template included at the end of this document.*

See the attached consent letters from parents and teachers, which have already been signed as part of the larger study, as well as the sample script requesting consent from the children, which is repeated each time a child leaves their classroom with a research assistant (See Appendix E). Child consent will be documented in writing each session. In addition, for the purpose of this study, a separate information letter will be sent home with the time use questionnaire, explaining the purpose of the additional questionnaire (see Appendix F).

b) In some cultural traditions, individualized consent as implied above may not be appropriate, or additional consent (e.g. group consent; consent from community leaders) may be required. If this is the case with your sample population, please describe the appropriate format of consent and how you will obtain it.

This is not the case.

---

8. DECEPTION AND FREEDOM TO DISCONTINUE

a) Please describe the nature of <u>any</u> deception, and provide a rationale regarding why it must be used in your protocol. Is deception absolutely necessary for your research design? Please note that deception includes, but is not limited to, the following: deliberate presentation of false information; suppression of material information; selection of information designed to mislead; selective disclosure of information.

There is no deception.

b) How will participants be informed that they are free to discontinue at any time? Will the nature of the project place any limitations on this freedom (e.g. documentary film)?

Participants will be informed in their information letter that they are free to discontinue at any time, with no negative consequences.

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9. RISKS AND BENEFITS

a) Please identify any foreseeable risks or potential harms to participants. This includes low-level risk or any form of discomfort resulting from the research procedure. When appropriate, indicate arrangements that have been made to ascertain that subjects are in "healthy" enough condition to undergo the intended research procedures. Include any "withdrawal" criteria.

The only risk is the fact that the children will miss approximately 45 minutes of class on 3 occasions. They may experience fatigue or distraction, and will be offered a break, should they request it, or should they display signs of fatigue or restlessness. Should the child refuse to leave their classroom with the research assistant, they will be offered the option of waiting until they are finished with the activity they are engaged in within their classroom first (for example, drawing a picture, eating snack). Should they continue to refuse to come, the research assistant will try again on two other occasions, before removing the child from the study. Should the child choose to come with the research assistant but refuse to participate in all assessments, the research assistant will spend approximately 10 minutes playing or drawing with the student, in order to build rapport, before returning the student to his/her classroom. However, if on the following occasion the child again refuses to participate in all assesssments, they will be removed from the study. Should the child choose to come with the research assistant but refuse to participate in a single assessment, the research assistant will conduct a different assessment, and will attempt to complete the other assessment on a different day. Should the child refuse to participate in a single assessment after three tries on three separate occasions, they will be excluded from that assessment.

b) Please indicate how the risks identified above will be minimized. Also, if a potential risk or harm should be realized, what action will be taken? Please attach any available list of referral resources, if applicable.

Parents have been informed that they may choose to have the child assessments conducted after school or during lunch recess .

c) Is there a likelihood of a particular sort of "heinous discovery" with your project (e.g. disclosure of child abuse; discovery of an unknown illness or condition; etcetera)? If so, how will such a discovery be handled?

Any suspected or disclosed child abuse or maltreatment will be reported to the principal who is mandated by law to engage Youth Protection services. Some indication of this will be included in the teacher and parent forms.
If the parents require a brief summary of the results of their child's assessment, the researcher will prepare a brief summary and make recommendations regarding further testing or intervention. In cases when the child is discovered to have a severe cognitive disability, the parent will be contacted and a recommendation for further testing will be made.

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10. DATA ACCESS AND STORAGE

a) Please describe what access research participants will have to study results, and any debriefing information that will be provided to participants post-participation.

They may request copies of the final report if they wish.

b) Please describe the path of your data from collection to storage to its eventual archiving or disposal. Include specific details on short and long-term storage (format and location), who will have access, and final destination (including archiving, or any other disposal or destruction methods).

Data will be stored in locked filing cabinets. Only the research team will have access to it. When the data is no longer needed it will be destroyed.

---

11. CONFIDENTIALITY OF RESULTS

Please identify what access you, as a researcher, will have to your participant(s) identity(ies):

☐	Fully Anonymous	Researcher will not be able to identify who participated at all. Demographic information collected will be insufficient to identify individuals.
☐	Anonymous results, but identify who participated	The participation of individuals will be tracked (e.g. to provide course credit, chance for prize, etc) but it would be impossible for collected data to be linked to individuals.
☐	Pseudonym	Data collected will be linked to an individual who will only be identified by a fictitious name / code. The researcher will not know the "real" identity of the participant.
☒	Confidential	Researcher will know "real" identity of participant, but this identity will not be disclosed.
☐	Disclosed	Researcher will know and will reveal "real" identity of participants in results / published material.
☐	Participant Choice	Participant will have the option of choosing which level of disclosure they wish for their "real" identity.
☐	Other (please describe)	

a) If your sample group is a particularly vulnerable population, in which the revelation of their identity could be particularly sensitive, please describe any special measures that you will take to respect the wishes of your participants regarding the disclosure of their identity.

This is not the case.

b) In some research traditions (e.g. action research, research of a socio-political nature) there can be concerns about giving participant groups a "voice". This is especially the case with groups that have been oppressed or whose views have been suppressed in their cultural location. If these concerns are relevant for your participant group, please describe how you will address them in your project.

By including the perspectives of the children in this research, an attempt will be made to value and validate their own voices.

Parent Information letter

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Dear Parent(s)/Guardian(s),

Enclosed you will find the forms that you have agreed to fill out as part of Dr. Harriet Petrakos' 2 year study of children's transition to school. We would be very appreciative if you complete these forms and return them to your child's teacher by _____, at which point we will send home a gift card as a small token of our thanks.

I would like to draw your attention, however, to one additional form, which was included by myself, Joanne Lehrer, a graduate student in the Department of Education at Concordia University, and a research assistant who has been working directly with many of your children since the beginning of the Petrakos Research Project. This year, I am completing my MA thesis and I am interested in studying your children's transition to grade one, and the activities they engage in when they are not at school. For this reason, the Petrakos research team is including one additional questionnaire in this year's package, entitled, *Daily Activities Checklist*, in which I request information about your child's before and after school activities during one (school) day.

I would be very grateful if you would take the time to fill out this additional questionnaire. Previous parents who have done so have appreciated the list of different activities contained within the questionnaire, and for this reason, I am including a list of those activities on the reverse of this letter (and so you don't hang on to the questionnaire just because you want to keep a copy of the different activity ideas ☺).

We will also be conducting one additional activity with the children this year; it is a measure of their creativity in which they are asked to move around the room in different ways and act like different animals and objects. We chose this assessment because we wanted to measure the children's creativity and also because it is a fun and active assessment that children enjoy participating in.

By filling out and returning the questionnaire, along with the other forms in the envelope provided, you are implying that you have given your consent to participate in my thesis (you have already provided written consent to participate in the larger Petrakos research project), and that you understand that you are free to change your mind at any time, that your participation is strictly confidential, and that the data from this study may be published at a later date, but without your name, your child's name, or the name of the school or teacher. Should you have any questions or concerns, please contact myself at, 514-848-2424 ext. 5691 or Dr. Harriet Petrakos, at 514 848-2424 ext. 2013. Should you not wish to fill out the *Daily Activities Checklist*, you may still participate in the

larger project on school transition, with no negative consequences for you or your child.

Thank you for your participation and for taking the time to help me with this project.

Sincerely,

Joanne Lehrer
Research Assistant
Project

Hariclia (Harriet) Petrakos, Ph.D.
Project Investigator, Family-School Collaboration

Daily Activity Ideas

- **play:**
  - **active physical play** (for example: running around, biking, playing street hockey)
  - **constructive play** (for example: Lego, blocks, building a fort)
  - **playing board games or doing puzzles**
  - **pretend play** (for example: playing house, make-believe with toys)
  - **creative play** (for example: drawing, painting, play dough, crafts)
  - **playing music/singing**
  - **playing videogames** (console or computer)
  - **rough and tumble play** (For example: Play fighting, wrestling, tickling)
  - **play with commercial toys** (for example: Barbie, action figures, guns)
  - **watching other children play**
- **doing homework**
- **watching tv/videos/dvds**
- **computer activities** (other than watching DVDs or playing games, for example: writing stories, drawing pictures, sending email, looking at websites)
- **structured activity** (for example: soccer lesson, swimming lesson, music lesson, scouts, etc)

Daily Activities Checklist

Filled out by ☐mother ☐father ☐other____

Dear parents,

This form is about how your child spends time outside of school. Please answer the questions based on one **typical school day** (a weekday, NOT a weekend day, birthday, holiday, sick day, or any other day that is 'out of the ordinary'). You will be asked questions about whether your child engaged in particular activities, with whom, where, and for how long. You may fill out this form on an on-going basis in the morning and afternoon/evening, noting each activity as your child completes it. Alternately, you may also choose to fill out the entire form at one time, in the evening after your child is in bed, by recalling all the day's activities.

The following questions are about the time between when your child woke up this morning, and the beginning of the school day.

This morning, did your child have any free time (extra time after eating, getting dressed, brushing teeth, etc.) before school?	If yes, please check off all the activities your child engaged in.	Please indicate the amount of time your child spent on each activity.	My child did this:	Was your child doing anything else at the same time? (i.e., eating, getting dressed)	Would you say that today was a typical morning? If not, please explain why.
☐ Yes ☐ No	☐ play (please specify) _____ ☐ complete homework ☐ watchTV/video/DVD ☐ play video games ☐ other (please specify) _____		☐ alone ☐ with parent(s) ☐ other adult _____ ☐ with sibling(s) ☐ with friend		☐ Yes ☐ No

This morning, did your child attend day care before school began?	Does your child typically attend day care before school begins?	**If your child does attend before school daycare,** to the best of your knowledge, how much time in daycare, in the morning, before school begins, is spent in the following activities?
☐ No ☐ Yes For how long? _____	☐ always ☐ sometimes ☐ never	free play _____ structured activities (i.e., arts and crafts, sports, singing, organized by an adult) _____ homework _____ snack _____ other (please explain) _____

This morning, how did your child get to school?	Who did he/she travel with?	How long did it take?
☐ Walk ☐ Cycle ☐ School Bus ☐ Car ☐ Public Bus		

The following questions are about the time between when school finished this afternoon and your child went to sleep tonight.

This afternoon, did your child attend after school day care?	Does your child typically attend day care at the end of the school day?	**If your child does attend after school daycare**, to the best of your knowledge, how much time in daycare, in the afternoon, after school ends, is spent on the following activities?	Did your child go anywhere else today (other than school, daycare and home?)
☐ No ☐ Yes For how long? _____	☐ always ☐ sometimes ☐ never	free play _____ structured activities (i.e., arts and crafts, sports, singing, organized by an adult) _____ homework _____ snack _____ other (please explain) _____	☐ no ☐ yes (please specify. i.e., grocery shopping, to friend's house, to restaurant) _____ _____ _____

This afternoon, how did your child get home from school?	Who did he/she travel with?	How long did it take?
☐ Walk ☐ Cycle ☐ School Bus ☐ Car ☐ Public Bus		

During this afternoon or evening, how much time did your child spend in **active physical play**? (for example: running around, biking, playing street hockey – not an organized lesson, team or club)	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	How much of this time was spent in unstructured play? (for example: sliding, running, climbing)	How much of this time was spent in games with rules? (for example: tag, hide and seek, soccer)	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend			

During this afternoon or evening, how much time did your child spend in **constructive play** (for example: Lego, blocks, building a fort)?	If yes, where? *If more than 1 response, please indicate the amount of time each.*	With whom? *If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).*	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	
During this afternoon or evening, how much time did your child spend **playing board games or doing puzzles**?	If yes, where? *If more than 1 response, please indicate the amount of time each.*	With whom? *If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).*	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	

During this afternoon or evening, how much time did your child spend in **pretend play** (for example: playing house, make-believe with toys)?	If yes, where? *If more than 1 response, please indicate the amount of time each.*	With whom? *If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).*	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	
During this afternoon or evening, how much time did your child spend in **creative play** (for example, drawing, painting, play dough, crafts – play, not lessons)?	If yes, where? *If more than 1 response, please indicate the amount of time each.*	With whom? *If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).*	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	

During this afternoon or evening, how much time did your child spend **playing music/singing** (play, not organized activity, practice, or lessons)?	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	
During this afternoon or evening, how much time did your child spend **playing videogames**?	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	

During this afternoon or evening, how much time did your child spend **in rough and tumble play?** (For example: Play fighting, wrestling, tickling)	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	
During this afternoon or evening, how much time did your child spend in **Play with commercial toys** (for example: Barbie, action figures, guns)?	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	

During this afternoon or evening, how much time did your child spend **watching other children play**?	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	
During this afternoon or evening, how much time did your child spend in **any other play activity?** (please specify) _____	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	

During this afternoon or evening, how much **total time did your child spend doing something that he/she chose him/herself?**	During this afternoon or evening, how much **total time did your child spend playing?**
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.

During this afternoon or evening, how much time did your child spend **doing homework?**	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, playing, talking on phone, etc.)	Did your child spend any time practicing for an extra-curricular activity today? (For example: piano practice at home) Please specify _____
☐ none ☐ less than 30 min. ☐ between 30 min. and 1hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend		☐ no ☐ yes For how long?
During this afternoon or evening, how much time did your child spend **watching tv/videos/dvds?**	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)	
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend		

During this afternoon or evening, how much time did your child spend **doing computer activities** *(other than watching DVDs or playing games, for example: writing stories, drawing pictures, sending email, looking at websites)* Please specify:	If yes, where? ***If more than 1 response, please indicate the amount of time each.***	With whom? ***If more than 1 response, please indicate how much time was spent with each person separately, or whether it was time spent all together (i.e. with sibling and parent).***	Was your child doing anything else at the same time? (for example: eating, doing homework, talking on phone, etc.)
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ home ☐ yard ☐ park ☐ street/sidewalk/alley ☐ other *(please specify)* _____	☐ alone ☐ parent(s) ☐ other adult _____ ☐ sibling(s) ☐ friend from class ☐ friend from school (not in same class) ☐ neighbour (not friend from school) ☐ other friend	

During this afternoon or evening, how much time did your child spend **in a structured activity** (for example: soccer lesson, swimming lesson, music lesson, scouts, etc)? Please specify _____	If yes, where?
☐ none ☐ less than 30 min. ☐ between 30 min. and 1 hr. ☐ between 1 and 1.5 hrs. ☐ between 1.5 and 2 hrs. ☐ more than 2 hrs.	☐ school ☐ community centre ☐ other (please specify) _____

Would you say that today's activities represent a typical afternoon/evening for your child?

☐ yes

☐ no (please explain) _____

Is there anything you would like to change, or wish you could change, about how your child spends his/her time after school (i.e., I wish my child had more/less homework; I wish my child had more/less neighbours his/her age)?

Is there anything you are particularly proud of or pleased with, when it comes to how your child spends his/her time? (i.e., I am really proud of the routine I established/I am pleased we are flexible with our daily routines; I am pleased that we make an effort to invite friends over regularly/I am pleased we prioritize family time and don't allow friends over on weekdays)

What does your child enjoy doing most of the time after school? Does he/she have any favourite activities?

Do you think that play is important for your child at his/her present age? If yes, please explain how/why (i.e., for academic development; for social development; for fun).

Are there particular types of play you encourage or support? Why?

Are there particular types of play you prohibit or discourage? Why?

Is there anything else you would like to add?

Child Interview in Pictures and Words

Child interview in words and pictures – Part 3
Now I will ask you some things about when you are not at school.
Can you draw a picture of your favourite thing to do at home?

Do you get to do that often (if not, ask why)?

How do you feel when you do that?

Are there any other things you like to do after school or on weekends?

Are there any people you like to spend time when you are not in school?

Do you have homework?

Do you do it at home or at school (daycare, étude)?

Does it take a long time?

Do you enjoy it?

Do you do anything special outside of school, like swimming lessons or piano lessons?

Does that take a lot of time?

Do you like it?

What kinds if things do you like to play when you are not at school?

Where do you like to play?

Code:___ Date:_____
Interviewer:_____

Do you like to play at home?

Do you like to play outside?

Do you like to play at the playground?

At friends' houses?

Who do you like to play with when you are not at school?

Do you like to play with your parents?

Do you like to play with your brother(s)/sister(s)?

Do you like to play with friends or neighbours?

Do you like to play by yourself?

Thank you very much for answering all my questions.

Code:___ Date:_____
Interviewer:_____

Picture Three

Provide the child with coloured pencils, markers, or crayons. Ask: Can you draw a picture of your favourite thing to do at home? *Take notes on what the child says as they draw. When they are finished, ask them to tell you about their picture, or ask them what you should write on their picture.*

Demographic Questionnaire

Information Form / Formulaire d'Information Date : _____

(CONFIDENTIAL / CONFIDENTIEL)

COMPLETED BY :
REMPLI PAR : ❑ Mother / *Mère* ❑ Father / *Père* ❑ Guardian / *Tuteur/tutrice*

Child/Enfant : ❑ Boy / *Garçon* ❑ Girl / *Fille*

1. Date of birth (dd/mm/yy) / *Date de naissance (jj/mm/aa)* _____
2. Place of birth / *Lieu de naissance* _____
3. Ethnic background / *Origine ethnique* _____
4. School / *École* _____
5. Teacher / *Enseignant(e)* _____
6. Other children living in the house / *Autres enfants vivant chez vous* (please state age, school, relationship to child) / *(notez l'âge, école, et lien avec l'enfant)*

_____

_____

_____

7. Number of parents living with the child / *Nombre de parents vivant avec l'enfant* ___
8. Number and relationship of other adults living with the child / *Nombre et lien des autres adultes vivant avec l'enfant :* ___

_____

Parent A : ❑ Mother / *Mère* ❑ Father / *Père* ❑ Guardian / *Tuteur/tutrice*

1. Which age group do you belong to? / *À quel groupe d'âge appartenez-vous?*

❑ Less than 18 years old / *Moins de 18 ans*
❑ 18 – 24
❑ 25 – 34
❑ 35 – 44
❑ 45 – 54
❑ 55 – 64
❑ 65 – 74
❑ 75 and above / *Plus de 75 ans*

2. Place of birth / *Lieu de naissance* _____
3. First language / *Langue maternelle* _____

4. Other languages spoken at home / *Autres langues parlées à la maison* :

_____

Parent A (con't):

5. Occupation : _____

- ❑ full-time / *à temps plein*
- ❑ part-time / *à temps partiel*
- ❑ not working, but looking for a job / *sans emploi, cherche du travail*
- ❑ not working, by choice / *sans emploi, par choix*

6. Level of education attended / *Niveau d'éducation fréquenté* :

- ❑ High school / *Secondaire* _____
- ❑ CEGEP / *Cégep* _____
- ❑ University / *Université;* ❑ Bachelor / *Baccalauréat;* ❑ Master / *Maîtrise;* ❑ PhD
- ❑ Professional certification / *Attestation professionnelle* _____
- ❑ Other / *Autre* _____

Parent B : ❑ Mother / *Mère* ❑ Father / *Père* ❑ Guardian / *Tuteur/tutrice*

1. Which age group do you belong to? / *À quel groupe d'âge appartenez-vous?*

- ❑ Less than 18 years old / *Moins de 18 ans*
- ❑ 18 - 24
- ❑ 25 - 34
- ❑ 35 - 44
- ❑ 45 - 54
- ❑ 55 - 64
- ❑ 65 - 74
- ❑ 75 and above / *Plus de 75 ans*

2. Place of birth / *Lieu de naissance* _____
3. First language / *Langue maternelle* _____
4. Other languages spoken at home / *Autres langues parlées à la maison* :

_____

5. Occupation : _____

- ❑ full-time / *à temps plein*
- ❑ part-time / *à temps partiel*
- ❑ not working, but looking for a job / *sans emploi, cherche du travail*
- ❑ not working, by choice / *sans emploi, par choix*

6. Level of education attended / *Niveau d'éducation fréquenté* :

- ❑ High school / *Secondaire* _____
- ❑ CEGEP / *Cégep* _____
- ❑ University / *Université;* ❑ Bachelor / *Baccalauréat;* ❑ Master / *Maîtrise;* ❑ PhD
- ❑ Professional certification / *Attestation professionnelle* _____
- ❑ Other / *Autre* _____

TCAM Sample Questions

Thinking Creatively in Action and Movement (TCAM; Torrence, 1981) sample questions:

1. Think of as many different ways to move across the room as you can. Show me or tell me.
2. What are some different things you could do with this paper cup?
3. Pretend you are a tree blowing in the wind. Show me how you would move.
4. Pretend that a very large elephant is standing on something you want. Show me how you would push him to make him move off of the thing you want.

BASC Sample Questions

Behavior Assessment System for Children, second edition (BASC-2) Teacher Rating Scale (Reynolds & Kamphaus, 2004) sample questions:

1. (the child) is creative (never, sometimes, often, almost always)
2. (the child) threatens to hurt others (never, sometimes, often, almost always)
3. (the child) communicates clearly (never, sometimes, often, almost always)
4. (the child) has tantrums (never, sometimes, often, almost always)