

**EXAMINING HOW TEACHERS SUPPORT THE SOCIAL AND
ACADEMIC NEEDS OF CHILDREN WITH AUTISM SPECTRUM
DISORDER IN PLAY-BASED KINDERGARTEN CLASSROOMS**

by

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Abstract

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that emerges in early childhood and is characterized by impairments in social interactions, communication, and language, and includes the presence of restricted or repetitive behaviours that can impede or interrupt functioning in daily living. Empirical evidence routinely suggests that structured tasks, predictable instructional context, and explicit teaching contribute to better social and academic success for kindergarten students with ASD. As such, it is important to understand how teachers instruct and plan for children with ASD in play-based kindergarten classrooms. Kindergarten classrooms in Ontario follow a play-based learning model, where the emphasis is placed on play, inquiry, and elements of child-led learning to aid in developmental and academic learning over the two-year program. Given the evidence of structured learning contexts for students with ASD and the open-ended nature of play-based learning, little is known about how teachers navigate the mandated play-based kindergarten curriculum in Ontario for students with ASD. This research explored how teachers support their students with ASD in a play-based kindergarten setting, and whether a possible tension existed when instructing in this environment. This study used a qualitative multiple case study to address: (1) how teachers are supporting the social and academic needs of students with ASD in a play-based environment, and (2) how teachers' perceptions of play influence the types of interactions they plan for students with ASD. Findings from the inductive analysis noted a connection among cases regarding the value of play in the kindergarten classroom, perceptions of successful engagement and connection to learning for students with ASD, and allowing adaptations to mitigate challenges in the kindergarten classroom. In addition to findings, implications for practical use and future research are discussed.

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Table of Contents

Abstract	ii
Acknowledgements.....	iii
List of Tables	v
Chapter 1 Introduction	1
Chapter 2 Literature Review	4
Chapter 3 Methodology	32
Chapter 4 Research Findings	41
Chapter 5 Discussion	62
References.....	90
Appendix A Interview Protocol	95
Appendix B Ethics Review Approval Letter	98
Appendix C Letter of Information and Consent	99
Appendix D Verbal Consent Script	101

List of Tables

Table 1: Demographic Information and Professional Development of Participants	35
Table 2: Themes and Sub-Themes	42

Chapter 1

Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that emerges in early childhood and is characterized by impairments in social interactions, communication, and language, and includes the presence of restricted or repetitive behaviours that can impede or interrupt functioning in daily living (American Psychiatric Association, 2013). Restricted interests, atypical play behaviour, and difficulties in social interactions can present challenges for young children with ASD in a kindergarten setting where unpredictable social relationships and the complexity of social, academic, and play expectations are present (Hart & Whalon, 2013; Barton et al., 2019). Kindergarten classrooms in Ontario follow a play-based learning model, where the emphasis is placed on play, inquiry, and elements of child-led learning to aid in developmental and academic learning over the two-year program (Ontario Ministry of Education, 2016). In contrast, empirical evidence routinely suggests that structured tasks, predictable instructional context, and explicit teaching contribute to better social and academic success for kindergarten students with ASD (Wong et al., 2013; Jung & Sainato, 2015; Maich et al., 2018). As such, it is important to understand how teachers instruct and plan for children with ASD in play-based kindergarten classrooms.

Purpose and Rationale

Environments that use a structured context to enhance play and academic skills can positively increase social play behaviour and academic learning outcomes for students with ASD in kindergarten (Jung & Sainato, 2015; Kamps et al., 2015; Nelson et

al., 2017; Maich et al., 2018; Gilmore et al., 2019; Barton et al., 2019). Given the evidence of structured learning contexts for students with ASD and the open-ended nature of play-based learning, little is known about how teachers navigate the mandated play-based kindergarten curriculum in Ontario for students with ASD. This curriculum outlines that teachers must approach learning through a play-based pedagogy for 4- and 5-year-old students (Ontario Ministry of Education, 2016). While the curriculum outlines the research and guidance for the use of play-based learning, the pedagogical response to teaching through play-based learning relies on the kindergarten teacher. Thus, it becomes increasingly important to understand how teachers support the social and academic needs of students with ASD within a play-based kindergarten environment. The purpose of this research is to investigate the disconnect between the conceptual understanding of play-based learning and the need for structured learning approaches for young students with ASD in kindergarten. This research will explore the possible tension that may exist to fill this research gap and examine how teachers support their students with ASD in a play-based kindergarten setting. Research is needed to understand the approaches to learning teachers use in their classroom when planning play-based learning activities for students with ASD. Understanding the experiences of teachers and the approaches they use will better inform whether their perceptions of play influence how they plan learning activities, facilitate social play behaviours, and meet learning goals for their students with ASD.

Findings from this research will guide teachers to implement supportive and functional learning experiences for students with ASD in play-based kindergarten. Adding these experiences to the academic literature will enhance the understanding of the

play-based learning curriculum and how it supports and aids in the inclusion of students with a diagnosis of ASD in kindergarten. Findings from this study provide context for how a play-based learning curriculum can foster social and academic play development for students with ASD and how teachers attempt to respond to, plan, and initiate learning opportunities for these students through the lens of play.

Research Objectives

There is empirical evidence to support structured learning for students with ASD, and there is empirical evidence to support the use of play-based learning for developmental and academic learning for typically developing kindergarten students. However, little research examines how teachers are responding to the learning needs of their students with ASD in a classroom that follows a play-based curriculum. It is essential to understand: 1) how teachers support social and academic learning for students with ASD, and 2) whether a tension exists between curricular and pedagogical expectations and actual classroom experiences for teachers teaching in a play-based classroom with a student with ASD. As such, the objectives of this research are twofold:

- 1) to examine how teachers are supporting the social and academic needs of students with ASD in a play-based environment; and,
- 2) to examine how teachers' perceptions of play influence the types of interactions they plan for students with ASD.

Chapter 2

Literature Review

Introduction

In 2016, the Ontario government released the “Kindergarten Program” as the new curriculum for kindergarten classrooms where specific emphasis is placed on play-based learning as the primary means for teaching and learning (Ontario Ministry of Education, 2016). The 2016 kindergarten program mandates that all kindergarten programs in Ontario are full-day integrated programs taught over a two-year period (JK and SK combined), with a play-based curriculum for teaching and learning (Ontario Ministry of Education, 2016). The 2016 kindergarten program was fully implemented after a 5-year transitional period, officially mandating that all programs in Ontario would be full day (Ontario Ministry of Education, 2016). In addition, they introduced learning expectations for kindergarten within four broad frames for learning (Ontario Ministry of Education, 2016). The overall emphasis in the curriculum is that these expectations are met through play-based learning for all kindergarten students in Ontario (Ontario Ministry of Education, 2016). Through conceptual understandings (or, essential ideas), this curriculum reflects the idea that children can learn concepts, skills, and strategies in a play-based environment and be able to construct meaning from learning through playful inquiry (Ontario Ministry of Education, 2016).

Play-Based Learning in Kindergarten

The following section will outline key information about the play-based learning model for kindergarten in Ontario. First, a brief overview of the development of the 2016 kindergarten curriculum will be examined and how that informs the current Ontario

kindergarten context. Following this, empirical research on play and the role it can have in learning contexts will be explored. Finally, literature on play-based learning will be included to explore its purpose and significance to this research study. Pyle and Danniels (2017) conceptualized a continuum of play-based learning that saw variations of play based on the level of child or adult directedness. This continuum will be used as a theoretical lens to guide this study.

Development of the Full-Day Play-Based Learning Model in Ontario

In 2010, the Ontario government released a full-day early learning kindergarten program (draft version) that largely influenced the direction and objectives of current Ontario kindergarten classrooms (Ontario Ministry of Education, 2010). This draft was created to replace the 2006 kindergarten curriculum, with the intention of providing an extended day, integrated program that utilized elements of inquiry, real-life contexts, and play (Ontario Ministry of Education, 2010). The purpose of this draft (and subsequently the final 2016 kindergarten curriculum) was to, “establish a strong foundation for learning in the early years, and to do so in a safe and caring play-based environment that promotes the physical, social, emotional, and cognitive development of all children” (Ontario Ministry of Education, 2010, p. 1). The move from traditional pedagogy to a full-day, play-based curriculum aimed to establish a strong foundation for learning in the early years, provide a play-based environment, and help children make a smoother transition to grade 1 (Ontario Ministry of Education, 2010). The program was designed based on the understanding that children develop within complex, interrelated systems (e.g., family, school, community) and the relationships within these systems set the foundation for learning (Ontario Ministry of Education, 2010). The draft version of the

full-day early learning kindergarten program reflected the belief that “four- and five-year-olds are capable and active learners, full of potential and ready to take ownership of their learning” (Ontario Ministry of Education, 2010, p. 2). The full-day program provided a smooth transition to grade 1, with both a teacher and an early childhood educator (ECE) as a teaching team to encourage reflective, responsive, and appropriate learning opportunities for kindergarten students (Ontario Ministry of Education, 2010). The draft version of the full-day early learning - kindergarten program acknowledged the vital link between play and learning and the legitimacy of its role as a vehicle for cognitive, social, emotional, and physical skill development (Ontario Ministry of Education, 2010; Karia, 2014). The basis of this draft program outlined the critical role of play as a developmentally appropriate learning tool and its value in kindergarten classrooms. The draft version was slowly phased in over a 5-year period, culminating in the final 2016 full-day kindergarten program that informs the current Ontario kindergarten context.

The Current Ontario Kindergarten Context

With the implementation of the 2016 kindergarten curriculum from the draft version, play has become the mandated form of learning, thus shifting the curricular focus to how play is used in kindergarten classrooms to aid developmental and academic learning for 4- and 5-year-old students. This program highlights the need for play as the primary form of learning in kindergarten, as it states that play is a child’s right and optimal for developmental progress (Ontario Ministry of Education, 2016). In addition, this document was influenced by the 2007 government document *Early Learning for Every Child Today: A Framework for Ontario Early Childhood Settings (ELECT)*, which was considered a foundational document for both the development of the draft program

and the current 2016 program (Ontario Ministry of Education, 2016). ELECT influenced the development of frames for learning in both the draft version and the 2016 kindergarten program. The four broad frames are designed to shape overall and specific expectations that moved away from the traditional curricular format (e.g., language, mathematics, science and technology, etc.) that was previously seen in the 2006 kindergarten curriculum (Ontario Ministry of Education, 2016). The frames (1) belonging and contributing, (2) self-regulation and well-being, (3) demonstrating literacy and mathematics behaviours, and (4) problem-solving and innovating are designed to reflect the natural way children learn that are critical to their development and reflect how an integrated approach can guide learning through play and forms of inquiry (Ontario Ministry of Education, 2016). Within these frames for learning, teachers are expected to provide opportunities to develop social and academic skills through play (Ontario Ministry of Education, 2016). The learning expectations for the kindergarten program are designed around these four frames, with the overall emphasis that these expectations are met through play-based learning (Ontario Ministry of Education, 2016).

With play as the mandated form of learning, the focus shifts to how play is being used in these classrooms to aid both developmental and academic learning for 4- and 5-year-old students. Play has been shown to positively influence the cognitive structure of children's thinking through the development of pretend play (Weisberg & Gopnik, 2013), and encourage better well-being and socio-emotional development through social and cooperative play (Ashiabi, 2007; Howard & McInnes, 2013). Play provides opportunities for children to engage in thinking that can be complex and developmentally appropriate (Van Oers & Duijkers, 2013; Wallerstedt & Pramling, 2013; Weisberg & Gopnik, 2013),

and educators in a play-based learning environment foster the notion that children are capable and competent learners (Ontario Ministry of Education, 2016). With policy documents such as the Ontario kindergarten program (Ontario Ministry of Education, 2016) emphasizing the need for play-based learning in kindergarten, research on play and its role in learning is crucial to understanding the context of the Ontario kindergarten classroom.

The Role of Play in Learning

The role of play as a positive influence on the development of academic and social skills in early primary education settings is continually reinforced in both research and policy documents. While policy documents such as the Ontario kindergarten program (Ontario Ministry of Education, 2010; Ontario Ministry of Education, 2016) point to the need for play-based learning in kindergarten, research on play has informed and further supported this mode of learning for young children in early primary settings (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; McInnes et al., 2013; Van Oers & Duijkers, 2013; Weisberg & Gopnik, 2013). The kindergarten policy document highlighted research that identified play as optimal for learning, and “promotes the development of higher-order thinking skills by capitalizing on children’s natural curiosity, their innate sense of wonder and awe, and their desire to make sense of their environment” (Ontario Ministry of Education, 2016, p. 21). The program regularly references an inquiry approach to learning and discusses the role of educators as co-learners for deeper learning opportunities to occur through play (Ontario Ministry of Education, 2016). This sentiment is also observed in empirical research on the role play has in the learning process. Pyle and Bigelow’s (2015) investigation into the role of play

in kindergarten echoed that of educational policy documents. For example, Pyle and Bigelow (2015) work revealed that play aided in the development of the social, emotional, cognitive, and self-regulation abilities of students in the kindergarten classroom. The teachers in this study used a play-based approach in their classrooms that utilized child-led and child-centred learning activities, scaffolded learning, and teacher guidance and extension of play (Pyle & Bigelow, 2015). The role play has in the kindergarten classroom is primarily influenced by the teachers' understanding of purposeful play for learning and development (Pyle & Bigelow, 2015), and the degree to which teachers integrate play into learning varies considerably (Pyle, DeLuca, & Danniels, 2017). Play is viewed as a rich context for learning (Van Oers & Duijkers, 2013), and when used in the academic environment, can aid cognitive competence (Wallerstedt & Pramling, 2012; Weisberg & Gopnik, 2013) and emotional well-being (Howard & McInnes, 2013; McInnes et al., 2013).

A conceptual division has emerged in research on play-based learning, causing a dichotomous view of play and learning as separate domains being observed in kindergarten classrooms (Pyle, DeLuca, & Danniels, 2017; Pyle & Danniels, 2017). Some educators discuss play as peripheral to learning (helpful for learning but not central to learning) rather than a crucial vehicle to encourage learning (Pyle, DeLuca, & Danniels, 2017). There tends to be a focus on play from an adult perspective, which causes play to be viewed as something non-academic and thus separate from education-driven goals (Wallerstedt & Pramling 2012; Howard & McInnes, 2013; McInnes et al., 2013). This dichotomous view of play as separate from learning creates discrepancies between what the literature on play-based learning encourages teachers to do – construct

learning opportunities within child interest, inquiry, and play (Van Oers & Duijkers, 2013). In addition to the discrepancies between play and play-based learning observed, an assumption being made in the kindergarten curriculum is that all students learn effectively through play. However, the curriculum does not explicitly address how students with exceptionalities (such as a child with ASD) are benefitting from a play-based approach to learning as compared to their typically developing peers. It is important to examine the differences between play and play-based learning in the kindergarten classroom to better understand how the needs of students with ASD can be addressed in this environment.

Play vs. Play-Based Learning

Empirical research supports the role of play in learning as it offers opportunities that allow room for academic facilitation while remaining developmentally appropriate (Pyle & Danniels, 2017). As stated by Pyle and Danniels (2017), “Research has shown that play can facilitate student learning by allowing children to build on and extend their previous knowledge and skills through interacting with others and/or the environment” (p. 275). There is often a distinction in the literature between ‘play’ and ‘not play’ with strong emphasis placed on intrinsically motivating and freely chosen child-led activities linked to ‘play’ and designated tasks and outcomes linked to ‘not play’ (Howard & McInnes, 2013; Jenvey & Jenvey, 2002). Subsequently, teachers have differing perspectives as to the role of play in the classroom, ranging from a developmental perspective to a social-emotional developmental approach (Pyle & Bigelow, 2015), as well as the role of themselves as a teacher or facilitator in play (Karia, 2014). Similarly, the debate often entails the purpose of play-based learning versus the purpose of play,

how play can integrate into the classroom as a learning tool, and the value play has in the development of learning in an academic classroom (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Pyle & Danniels, 2017).

In addition to varying perspectives on the purposes of play there is also much debate regarding definitions of play, including how to define what play means from the perspective of young children (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; McInnes et al., 2013; Van Oers & Duijkers, 2013; Weisberg & Gopnik, 2013). Play is generally referred to in descriptive terms; that is, what social-emotional responses and observable behaviour that is happening during an activity to constitute it as play (Ashiabi, 2007; Wallerstedt & Pramling, 2012). Common words associated with describing what play is includes: pleasurable, intrinsically motivating, imaginative, fluid, spontaneous, and an end in itself (Ashiabi, 2007; Wallerstedt & Pramling, 2012). In addition to using descriptive, observable behaviours as a way to define play, researchers also discuss ways children self-define play based on cues in their environment, including location of activities, adult presence, and levels of choice (Howard & McInnes, 2013; McInnes et al., 2013). Furthermore, play is referenced in terms of its context, or what format play can emerge in. For example, play can emerge in social contexts as children engage in cooperative play (two or more children with assigned roles) and sociodramatic play (or pretend play) where children use imagination and creativity to take on created roles in pretend situations through fantasy and symbolism (Ashiabi, 2007; Weisberg & Gopnik, 2013). Play can be an arena to display knowledge and competency of their real world (Wallerstedt & Pramling, 2012), and a format to display ‘cultural activities,’ or the ability to navigate rules, levels of involvement, and degrees of freedom within the play

context (Van Oers & Duijkers, 2013). While there is varying consensus on the definition of play (Jenvey & Jenvey, 2002), it is generally described as “freely chosen, actively engaging, opportunistic, pleasurable, creative, and concerned more with means than ends” (Pyle & Daniels, 2017, p. 274), based on the observable behaviour of children engaged in play. When play is described as a format, or a vehicle for learning, it leads to the discussion about play-based learning and the ways play is used to meet academic goals and create a rich context for learning (Van Oers & Duijkers, 2013).

Play is multidimensional, and interactions or activities require levels of flexibility, positive affect, and intrinsic motivation, among others, to be considered ‘playful’ (Jenvey & Jenvey, 2002; Howard & McInnes, 2013). The knowledge on the benefits of play for young children’s development has led to research on play-based learning and the effectiveness of play as a valuable learning tool that can incorporate varying levels of adult involvement and integration of academic skills (Pyle & Danniels, 2017). Play-based learning allows children to make choices in play based on their interests and engage in socialization with peers (Karia, 2014), while also serving as a vehicle for teachers to incorporate academic concepts based on inquiry and student interests (Pyle & Bigelow, 2015; Pyle & Danniels, 2017).

Empirical research highlights the critical role play has for social-emotional development in kindergarten (Ashiabi, 2007; Pyle & Bigelow, 2015; Pyle, DeLuca, & Danniels, 2017). Play can positively impact socio-emotional learning in the classroom, as children engage in cooperative play with their peers that help them to practice emotional regulation, social behaviours (such as negotiations or reciprocal conversation), and problem-solving (Ashiabi, 2007). Similarly, Wallerstedt and Pramling (2012) argued that

play and learning are inherently woven together, as children play within experiences and tools that they already know and extend on this play when given further learning opportunities that expand their knowledge repertoire. In this instance, while play must be intrinsically motivated to be deemed ‘play,’ the capabilities of educators to provide extrinsic actions or novel experiences for play can encourage learning that extends into cognitive, social, and emotional development (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Weisberg & Gopnik, 2013). However, there is a lack of agreement as to what role educators can have in children’s play, whether teacher involvement in child-led learning creates “not play” situations, and whether learning in early primary contexts come explicitly from direct teacher-led instruction (Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; McInnes et al., 2013; Pyle & Danniels, 2017). While some view the purpose of play as inherently child-directed, others think play is purposeful only when outcomes are adult-directed (Karia, 2014). A dichotomous view of play and learning is frequently observed (Pyle & Danniels, 2017), as some teachers view these as separate constructs, and thus struggle to implement learning through different variations of play, and how play activities can lead to academic learning (Pyle, DeLuca, & Danniels, 2017). As well, Howard and McInnes (2013) also noted that there is a discrepancy between activities that teachers and children see as ‘play’ (e.g. free of adult constraint, freely chosen) and what they may see as ‘not like play’ (e.g. designated tasks, adult direction), thus further exemplifying this dichotomous view. Differentiating between variations of play-based learning can help identify the differences between play and how educators can implement play-based learning in the kindergarten classroom.

Play is primarily regarded as crucial to early development (Ashiabi, 2007; Howard & McInnes, 2013; Weisberg & Gopnik, 2013); however, existing research on play-based learning has identified that there are still differing perspectives as to how play can be implemented effectively in the classroom for the purpose of learning (Pyle, DeLuca, & Danniels, 2017; Pyle & Danniels, 2017). Pyle and Danniels (2017) have proposed a continuum of play-based learning, which identifies variations of play for learning as a spectrum in terms of the level of engagement and the role of the teacher and the child. While the curricular mandates for play-based learning are broad, with some specific focus on inquiry-based learning (Ontario Ministry of Education, 2016), the conceptualization of this continuum highlights the pedagogical approaches teachers are doing to teach through play (Pyle & Danniels, 2017). Through this continuum, the authors identify five types of play-based learning that could emerge in play-based kindergarten classrooms: free play, inquiry play, collaborative play, playful learning, and learning through games (Pyle & Danniels, 2017). This continuum ranges from play that is entirely child-directed (free play) to entirely teacher-directed (learning through games) with variations of play in between that involve some combination of both (Pyle & Danniels, 2017). There is preference for variations of play that include child-led inquiry, sociodramatic elements, pretend scenarios, and social engagement as a means to show learning, and these are more commonly observed in free play, inquiry play, and collaboratively designed play (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Van Oers & Duijkers, 2013; Pyle & Danniels, 2017). This conceptualization challenges the view of play as dichotomous (either child-led or teacher-led), as it suggests that varying forms of play can exist in a play-based learning environment that involves different levels of child-

directed or teacher-directed activities (Pyle & Danniels, 2017). While there is evidence of some structured play (directed by adults) in this continuum, the most common form of play-based learning observed was inquiry play, which also reflects the desired objectives of the play-based curriculum (Ontario Ministry of Education, 2016; Pyle & Danniels, 2017). The theme of child-directed, mutually-directed, and adult-directed play in the literature (Pyle, DeLuca, & Danniels, 2017; Pyle & Danniels, 2017) supports this development of a continuum of play-based learning, as integrating play at varying levels for learning creates a more holistic balance in the kindergarten classroom (Karia, 2014).

Understanding this continuum and the integration of play in learning helps to better understand the expected outcomes of the current Ontario kindergarten program. Given that empirical research has emphasized the role of play in learning and the need for play-based learning in kindergarten, there is little research that exists as to how teachers meet the needs of students with exceptionalities in this program. This study examines how teachers are able to plan, instruct, and support students with autism spectrum disorder (ASD) in play-based kindergarten classrooms, and thus the need to explore the empirical literature on ASD and play is necessary. The following section will explore ASD, its characteristics, and the differences of play students with ASD experience in the kindergarten classroom.

Autism Spectrum Disorder

With existing research that highlights the empirically validated use of play in learning environments at the kindergarten level (Ashiabi, 2007; Howard & McInnes, 2013; Weisberg & Gopnik, 2013; Van Oers & Duijkers, 2013; Pyle & Danniels, 2017; Pyle, DeLuca, & Danniels, 2017), it is important to highlight the use of play both as a

skill and as a context. The context of play usually involves the environment that play is occurring and the activities taking place (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Van Oers & Duijkers, 2013). Within the context of play, children typically engage various play skills that contribute to success in the context presented (McInnes et al., 2013; Weisberg & Gopnik, 2013). Generally speaking, children with typical development tend to enter kindergarten with some play skills that allow them to more naturally engage in play contexts (Ashiabi, 2007; McInnes et al., 2013; Weisberg & Gopnik, 2013; Van Oers & Duijkers, 2013). When play skills are lacking or not naturally presented, it can make it harder for a child (such as a child with ASD) to engage in the context of play, and thus engage in the expectations outlined by policy and teachers that value learning within a play-based context (Hart & Whalon, 2013; Wong et al., 2013; Jung & Sainato, 2015; Maich et al., 2018; Barton et al., 2019; Gilmore et al., 2019). Understanding the concept of play as both a skill and a context helps to better understand how students with ASD engage in play-based learning in kindergarten, how the characteristics associated with ASD can impact play skills and engagement in play contexts, and empirically validated best practices for learning for students with ASD.

Characteristics of ASD

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by persistent impairments in social interactions, communication, and language, with the presence of restricted and repetitive behaviours (American Psychiatric Association [APA], 2013). Individuals with ASD have prominent characteristics that emerge in early childhood (with typical onset of symptoms occurring anywhere from 12-24 months) that present in response to social demands and developmental capacities (APA, 2013). These

characteristics cause significant challenges that interrupt functioning throughout the lifespan and vary in severity of needed supports for daily functioning (APA, 2013). Autism is considered a spectrum disorder due to this range in support needs, as characteristics of the diagnosis can present in mild, moderate, or severe forms and are typically unique to each individual with a diagnosis (APA, 2013). Social challenges can present themselves in the forms of characteristics in social-emotional reciprocity, poorly integrated verbal and nonverbal communication, and difficulty with maintaining and understanding relationships (APA, 2013). The characteristic of social communication can persist in individuals with ASD regardless of intellectual and language ability (Hart & Whalon, 2013). Social challenges are at the core of ASD (APA, 2013) and can impact how children with ASD can communicate and learn across their lifespan (Kamps et al., 2015). While social challenges are the prominent impairment, the disorder is also marked by restricted or repetitive behaviours that manifest in the form of highly fixated interests, inflexibility with routines, repetitive motor movements or speech, and reactivity to sensory input (APA, 2013). Understanding the characteristics associated with ASD is essential to understanding how these impairments impact the play behaviours and challenges in play settings that children with ASD face.

For children with ASD in education contexts, there are several evidence-based interventions and best practices that contribute to better success in learning, skill acquisition, and/or behavioural outcomes (Hume et al., 2021). While there are several interventions that target specific skills or desirable outcomes, there are some typical interventions that are best practices for students with autism (Hume et al., 2021). Augmentative and alternative communication (AAC) and visual supports are regularly

observed in classrooms as systems of communication that can be explicitly taught for aiding students with ASD to communicate their needs and provide support for independence in learning (Hume et al., 2021). Direct instruction, discrete trial training, modeling, prompting, and reinforcement are other forms of evidence-based practices that rely on explicit instruction or systematic ways of teaching targeted and desirable outcomes (Hume et al., 2021). There are also interventions that target social learning such as peer-based instruction and intervention, social narratives, and social skills training where prescribed scenarios are targeted to enhance appropriate social responses (Hume et al., 2021). These practices highlight interventions that are evidence-based for supporting students with ASD in educational contexts, and rely heavily on the notion that explicit instruction and systematic ways of presenting knowledge and skills are best practice (Hume et al., 2021).

ASD and the Continuum of Play

The continuum of play-based learning as conceptualized by Pyle and Danniels (2017), outlines a spectrum of play that can be observed in play-based kindergarten classrooms. The continuum includes: free play, inquiry play, collaboratively designed play, playful learning, and learning through games (Pyle & Danniels, 2017). This continuum is a way to capture the variations of play-based learning that can occur in classrooms designed to use play as a vehicle for learning (Pyle & Danniels, 2017). When looking at the context of play, child-directed and collaborative forms of play-based learning are highly valued both in research (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; Van Oers & Duijkers, 2013; Pyle & Danniels, 2017), and in the curricular policy document (Ontario Ministry of Education, 2016). Within this continuum, free play, inquiry play, and collaboratively designed play rely heavily on

social communication among child-child and child-educator interactions in the classroom, as the locus of control remains largely with the child while they negotiate the context for learning during play (Pyle & Danniels, 2017). Within the Ontario policy document, the theme of social interactions within playful environments persists as it lists pedagogical approaches that rely heavily on natural social communication such as building responsive relationships, learning through play, and valuing educators as co-learners (Ontario Ministry of Education, 2016). These pedagogical approaches exist via the ability to communicate and interact socially in the kindergarten classroom and through play-based learning. In addition, one of the four frames listed in the curricular document is ‘belonging and contributing’ which further emphasizes that success in the play-based environment can include the social ability to connect through play with peers (Ontario Ministry of Education, 2016). The continuum and the kindergarten curriculum demonstrate a natural inclination towards play contexts that value social complexities via inquiry, free play, and responsive relationships, however students with ASD can find this environment challenging when social nuances and interactions are present.

In one study, children with ASD showed significantly substantial challenges compared to their typically developing peers in areas such as social competence skills with peers and prosocial and reciprocal relationship behaviours (Janus et al., 2018). ASD literature in early primary education primarily focuses on an examination of social communication challenges observed during play and peer interactions (Hart & Whalon, 2013; Gilmore et al., 2019). Areas such as interactions, reciprocity, and social bids can be confusing and unsuccessful for students with ASD in natural settings (Kamps et al., 2015). Thus, social learning is not inherent for students with ASD, and explicit teaching

is usually required to teach appropriate social behaviour, peer engagement, or communication skills (Kamps et al., 2015). Children with ASD can achieve well academically in an inclusive classroom setting; however, sudden or unexpected variations in social interactions, complexity in expectations, and diversity in play behaviours can hinder their success in education settings (Hart & Whalon, 2013; Barton et al., 2019). Due to the challenge in social communication, children with ASD experience interactions with peers less often and thus are seen more on the periphery of play interactions in inclusive settings (Gilmore et al., 2019). Hart and Whalon (2013) acknowledged key areas of social challenges that students with ASD experience in inclusive education settings, such as forming and maintaining relationships with their peers, which rely on flexibility, subtle and nonverbal communication, and negotiation and cooperation. This can be extremely challenging for students with ASD to manage and considerably impact the ability of students with ASD to participate in key elements of play in kindergarten, such as sociodramatic play or pretend play (Hart & Whalen, 2013). This was similarly acknowledged by Honey et al., (2007) as rigidity and repetitiveness in play can be functional for students with ASD (it serves a purpose to them only) but regularly impede their ability to engage in social communication with their peers in more complex and diverse ways. Thus, it is evident that social learning and communication are significant challenges for students with ASD. In addition to social challenges, repetitive behaviours can further hinder the inclusion of children with ASD in play settings (Hart & Whalon, 2013; Honey et al., 2007).

Researchers were also interested in the impact of repetitive behaviours on children's engagement in play settings (Honey et al., 2007; Barton et al., 2019).

Repetitive behaviours observed in young children with ASD were typically characterized by sameness, rigidity, and repetitiveness in play activities and can impact the child's ability to engage in diverse play behaviours such as imaginative or dramatic play (Honey et al., 2007; Barton et al., 2019). Students with ASD present with atypical play behaviours (such as repetitive play behaviour with toys like stacking) that limit their ability to engage in play that involves elaborate and varied contexts, and thus identifies a key challenge in the ability to engage in imaginative and communicative ways with their peers (Honey et al., 2007). Children with ASD who engage in repetitive play behaviours present with an idiosyncratic nature of play, which leads to a lack of diversity in play behaviours in kindergarten (Barton et al., 2019). With the presence of atypical play and repetitive behaviours in play settings, communication becomes challenging, as children with ASD may present unusual communicative responses alongside their typically developing peers (e.g., echolalic phrases), which leads to miscommunication and misunderstanding in pretend play contexts (Hart & Whalon, 2013). While ASD characteristics in children can present these challenges in play contexts, the presence of adult-led play (as observed in the continuum of play-based learning) and structured tasks can contribute to better engagement in play-based learning environments.

Research on the continuum of play-based learning identified that some teachers in kindergarten classrooms would engage in more teacher-directed learning where the locus of control was with the educators, and subsequently identified these moments as 'playful learning' and 'learning through games' (Pyle & Danniels, 2017). The teachers in this study directed the structure of the learning activity and its outcome while maintaining a context of play, thus maintaining a 'playful' learning environment with prescribed

activities (Pyle & Danniels, 2017). When more adult-led interactions in play occur, there is more direct instruction to guide learning which can be helpful for students with ASD to better engage in playful learning or learning through games (Hart & Whalon, 2013; Pyle & Danniels, 2017; Barton et al., 2019). However, research and policy repeatedly stress more child-directed forms of play as effective in play-based learning classrooms (Howard & McInnes, 2013; McInnes et al., 2013; Van Oers & Duijkers, 2013; Weisberg & Gopnik, 2013; Ontario Ministry of Education, 2016), and thus causes challenges for students with ASD who struggle with social communication and rely more heavily of direct forms of teaching and learning. Understanding the characteristics of ASD and the atypical relationship with play in the kindergarten classrooms, the practices of teachers in kindergarten classrooms as observed by the continuum of play-based learning, and subsequently the nature of the current pedagogy of the kindergarten classroom, it is reasonable to assume a disconnect exists. Understanding the differences between evidence-based approaches (structured tasks) that positively influence learning for students with ASD and the pedagogical nature of how teachers implement a play-based curriculum is examined in the following section to highlight the disconnect that exists.

Disconnect: Students with ASD in the Kindergarten Classroom

A Structured Approach to Learning

Despite empirical evidence on the importance and usefulness of play-based learning in the early years for typically developing children, less is known about the impact of play-based learning for children with ASD. Best practices identified in the literature on young children with ASD in play or kindergarten contexts show that a structured (or systematic) approach to learning is beneficial to aid both academic and

social learning progress (Wong et al., 2013; Jung & Sainato, 2015; Kamps et al., 2015; Nelson et al., 2017; Maich et al., 2018; Gilmore et al., 2019; Barton et al., 2019). This includes playful contexts where adult-led instruction and structured tasks are used, like the teacher-directed elements observed in the continuum of play-based learning (Pyle & Danniels, 2017). The literature in the current Ontario kindergarten context points to the effectiveness of play-based learning as best practice for developmental, academic, and social learning (Karia, 2014; Pyle & Bigelow, 2015; Pyle & Danniels, 2017; Pyle, DeLuca, & Danniels, 2017). Within this, more child-directed elements of play-based learning are valued and observed, such as free play and inquiry play as identified on the continuum (Pyle & Danniels, 2017). There is a disconnect between what is being observed in kindergarten classrooms and policy documents (child-directed play), and what is effective to help students with ASD learn in a play-based environment (teacher-directed instruction). Given the disconnect between best practices for teaching children with ASD and best practices for learning in kindergarten, it is reasonable to suspect a tension exists when teaching a child with ASD through a play-based pedagogy. If tension does exist in kindergarten classrooms regarding how children with ASD learn like their typically developing peers through play, it is important to acknowledge the literature on structured approaches to learning as well as the play-based approach and their differences. Play can be addressed both as a skill (the use of play to complete an activity) and as a context (play as the setting where various activities occur). In the kindergarten classroom, play skills and play contexts are intertwined, as play-based learning relies on the setting of the classroom to be play-based (Ontario Ministry of Education, 2016) while also learning how to engage in various play skills. To examine structured approaches to

learning that benefits students with ASD in the kindergarten classroom, research will be examined under the separate lens of skill and context.

Play as a Skill.

Environments that use a structured (or systematic) approach to teach effective play and academic skills can positively increase social play behaviour, diversity in play, and academic learning outcomes for kindergarten children with ASD (Jung & Sainato, 2015; Barton et al., 2019). Children with ASD learn effectively when there is a structured task and predictable instructional context that is explicit in its teachings and expectations (Jung & Sainato, 2015; Maich et al., 2018). Frequently, children with ASD require intentional instruction through systematic approaches (prompts and reinforcement) that target desired learning objectives or behaviours to increase skill repertoire or promote the generalization of skills (Wong et al., 2013; Barton et al., 2019). Teaching effective play skills can thus become challenging in an unstructured environment, as levels of child-directed activities can cause social nuances and interactions to become more unpredictable, thus emphasizing the need for explicit strategies and teaching to be utilized in play settings (Jung & Sainato, 2015; Gilmore et al., 2019). Key strategies that use a structured (and systematic) approach to teach effective play skills to children with ASD rely on specific intervention models to increase positive play behaviour (e.g. prompting and reinforcing) and generalize these skills to the play environment (Wong et al., 2013; Jung & Sainato, 2015; Kamps et al., 2015; Maich et al., 2018; Barton et al., 2019; Gilmore et al., 2019). Stay, Play, and Talk was a structured program implemented by Maich et al., (2018) where peers and educators were trained with prescribed rules in an inclusive, naturalistic setting to increase social play behaviour for children with ASD.

Similar to Jung and Sainato (2015), Maich et al., (2018) found that the structured nature of the kindergarten environment with the stay, play, and talk program provided opportunities to play structured games and engage in structured learning centres led by educator specific goals, and increased social interactions in this type of setting. However, they found that this increase did not translate into unstructured periods, as little change existed in their social interactions when the learning period became child-led (Maich et al., 2018). Unstructured play periods can be unsuccessful for children with ASD if they do not have the prerequisite play skills similar to their typically developing peers, and thus teaching targeted skills, increasing diversity in play behaviour, and then subsequently generalizing these skills once mastered leads to better play development in the kindergarten classroom (Barton et al., 2019). The best practice for educators is to structure specific play periods for students to practice targeted skills, instead of generalized periods of child-led play (Hart & Whalon, 2013; Jung & Sainato, 2015; Maich et al., 2018).

Play as a Context.

The research of Jung and Sainato (2015) suggests that using the unique (or restricted) interests of the child with ASD and embedding them into prescribed play contexts can vastly improve the child's desire to engage in play socially with their peers. Using structured teaching tools such as video modelling or social scripts, or priming targeted play behaviours with preferred interests, helped children with ASD follow prescribed play scenarios with their peers (Wong et al., 2013; Jung & Sainato, 2015; Nelson et al., 2017). Children with ASD have atypical play behaviours that often involve restricted interests in play (e.g. fixation on dinosaurs) that make social play with peers

challenging, and embedding these restricted interests into play contexts improves the desire for children with ASD to engage with their peers in play (Honey et al., 2007; Jung & Sainato, 2015).

Several studies have acknowledged the effectiveness of structured approaches to teaching students with ASD in kindergarten or early primary settings. Hart and Whalon (2013) acknowledged that allowing children with ASD to choose activities that are of interest to them vastly influences their motivation to adhere to structured learning tasks and improves their social communication with peers. Implementing structured tasks using the interests of students with ASD largely influences the increase of interactions and play behaviours with their peers (Hart & Whalon, 2013; Jung & Sainato, 2015). Nelson et al., (2017) had a similar finding, in that priming activities with preferred toys and interests engaged children with learning centres more. They also found that through structuring preferred activities and interests into complex play (e.g. sociodramatic play), children with ASD became more familiar and comfortable engaging in natural play environments in the kindergarten classroom (Nelson et al., 2017). For students with ASD, priming learning activities with preferred materials creates an increase in engagement in parallel, associative, and cooperative activities with their peers, which subsequently increases their likelihood to engage in more free play or social play (Hart & Whalon, 2013; Jung & Sainato, 2015; Nelson et al., 2017). Gilmore et al., (2019) observed that children were more likely to engage in play activities with their peers on the playground when the activity was prescribed with rules (e.g. ball games) and followed a reliable structure. Significant positive social interactions for children with ASD occur when engaged in structured play with their peers, and increases prosocial behaviours such as cooperating,

reciprocating, and sharing with their peers (Kamps et al., 2015; Nelson et al., 2017; Maich et al., 2018; Gilmore et al., 2019). Social skills deficits are one of the defining symptoms in children with ASD, and evidence-based practices such as peer network interventions have shown an increase in social skill development of children with ASD in natural play settings in kindergarten (Kamps et al., 2015; Maich et al., 2018; Gilmore et al., 2019). Interventions that were structured, targeted specific skills for explicit teaching, used social scripts and cues, and trained peer reinforcement improved social communication with peers in play settings for children with ASD (Kamps et al., 2015; Gilmore et al., 2019). Empirical research consistently highlights these practices and interventions as creating successful learning environments for students with ASD, yet the practices observed in the literature on play-based learning can sometimes differ.

In 2013, Van Oers and Duijkers identified tools teachers use to teach in a play-based learning context (orienting, structuring and deepening, broadening contributing, and reflecting), which provides insight into what it is like teaching in the play-based approach. Orienting involves the teacher focusing the students' attention on specific aspects occurring in play, whereas structuring and deepening involve developing an open-ended task or problem and allowing the children to explore within that (Van Oers & Duijkers, 2013). Broadening involves connecting what children are playing with to relevant and additional knowledge, contributing involves introducing novel tools to help students expand on their play, and reflecting involves stimulating children to reflect on and evaluate what they are doing during play (Van Oers & Duijkers, 2013). The tools identified are routinely seen in the literature on play-based learning and are extensively acknowledged in the Ontario kindergarten curriculum. However, these tools align with

child-directed play elements (Pyle & Danniels, 2017) and rely on the children to explore learning through natural play settings. The teacher can then extend that learning and incorporate academic and related knowledge in the play. This differs from empirical evidence on structured learning tasks for students with ASD, creating a discrepancy that diverges from empirical evidence of play-based learning and the importance of child-directed learning opportunities. The former relies on prescribed, structured, evidence-based, and reliable learning tasks that depend on adult-directed support. The latter utilizes child-based inquiry, shared knowledge, natural play contexts, and child-directed learning within a play-based environment. In addition to this disconnect, children with ASD experience challenges with social communication and interactions (APA, 2013) that present unique challenges for children with ASD in a child-directed, play-based environment. Using prescribed tools to create a structured environment is what works well to help students with ASD learn successfully (Hart & Whalon, 2013; Jung & Sainato, 2015; Kamps et al., 2015); however, this can be difficult to execute in an environment that highly values free play, unstructured learning tasks, spontaneous social interactions, and learning based on student inquiry (Pyle & Danniels, 2017). In addition, the perceptions teachers hold about what play contexts looks like, how to engage students with ASD in play, and build social connections with peers impact the environment of the kindergarten classroom and the activities offered (Pyle, DeLuca, & Danniels, 2017). Understanding the perceptions teachers hold and how it impacts practice is crucial to understanding the tension that may exist in the kindergarten classrooms between structured approaches for students with ASD and mandated play-based learning.

The Influence of Teacher Perceptions in Play-Based Learning

Current literature on play-based learning focuses on the child-directed element of the play-based classroom and the vast differences in play that occur in these classrooms (Van Oers & Duijkers, 2013; Karia, 2014; Pyle & Bigelow, 2015; Pyle, DeLuca, & Danniels, 2017). There are differences in how play-based learning looks in kindergarten classrooms, and how teachers are teaching in a play-based classroom. As mentioned previously, Pyle and Danniels (2017) observed that a continuum of play-based learning exists in kindergarten classrooms that range from free play (child-directed) to learning through games (adult-directed). While learning through games involved the most structure (and would potentially be successful for students with ASD), the most common play-based learning observed were free play and inquiry play (both inherently child-directed) and thus potentially points to a less structured approach to learning tasks taking place in play-based learning kindergarten (Pyle & Danniels, 2017). Teachers' perceptions can largely influence the way teachers will integrate play-based learning into their classrooms, as well as their perspectives on play as a learning tool in kindergarten (Pyle, DeLuca, & Danniels, 2017; Pyle & Danniels, 2017; Timmons, 2017). Understanding how teachers' perceptions influence their instruction in kindergarten is essential to recognizing their perceived understanding of play and how to support their students in learning through play.

In one study, Timmons (2017) examined the factors that contribute to teacher and Early Childhood Educator (ECE) expectations (expectations they have of their students in relation to their academic performance) in kindergarten and highlighted distinctions among teaching philosophies, educator roles, teaching interactions, and student evaluation to better understand their expectation levels. This research used a

questionnaire to identify educator factors that contributed to their expectations for students in kindergarten (Timmons, 2017). Findings suggest that the decisions teachers make for planning, learning opportunities, and interactions are directly influenced by the expectations they have for each student (Timmons, 2017). This, in turn, influences how they support their students to meet curriculum expectations (Timmons, 2017). While ECE's responded with a child-centred focus (e.g., inquiry, play-based learning, developmentally appropriate practices), teachers responded with a more teacher-directed, structured lens, with play-based philosophies as an addition to teacher-directed learning activities (Timmons, 2017). Teachers predominantly viewed play as a helpful interaction but still maintained the belief that teacher-led instruction best met the curricular expectations (Timmons, 2017). Understanding the different expectations teachers have for their students, and their beliefs towards play and instruction, further exemplifies the existence of possible tension between what is expected by the kindergarten curriculum and how teachers can respond to the learning needs of their students with ASD. Teachers' instructional decisions and assessment practices are based on their personal perceptions and teaching philosophies, and this in turn reflects the learning opportunities provided to students in kindergarten (Timmons, 2017). The way teachers plan for instruction can directly impact the opportunities for learning that students experience (Karia, 2014; Timmons, 2017), and thus it is important to understand how teachers' play-based learning pedagogies inform their practices to better understand how play-based learning is meeting the needs of their students with ASD.

Summary

Given the evidence of play-based learning and the literature on structured learning for young students with ASD, there may be a tension between the conceptual understanding of play-based learning in kindergarten and the need for structured (or systematic) learning approaches for young students with ASD. If there is a disconnect between the systematic approaches that traditionally support students with ASD and the play-based nature of kindergarten classrooms, research is needed to honour teacher perceptions of play and supporting students with ASD. In addition, providing context for how teachers instruct and plan for their students with ASD in a play-based environment is needed. Therefore, this research examines how teachers meet the academic and social learning needs of their students with ASD within a play-based kindergarten environment. A qualitative approach is used to explore two research objectives: to better understand how teachers are supporting the social and academic needs of their students with ASD (objective 1) and how the teachers' perceptions of play influence how they plan interactions and play experiences for their students with ASD (objective 2).

Chapter 3

Methodology

A qualitative multiple case study design was used to address the objectives of the research. This approach helped to identify the relationship between evidence-based practices for students with ASD and the conceptual understanding of play-based learning for teachers in kindergarten as they tried to meet the learning needs of students with ASD while also teaching in a mandated play-based pedagogy that relies on play, inquiry, and child-directed learning. This research seeks to understand the perspective of teachers in kindergarten and how they plan and instruct play-based learning for students with ASD in kindergarten. A multiple case study provided context for how teachers use the play-based curriculum to foster social and academic play development for their students with ASD, and whether there were similarities among different classrooms or if the experiences were unique to each classroom. Stake (2006) highlighted that a multicase study seeks to better understand the ‘quintain’ or the single case. By assessing multiple cases with the same research questions and objectives, better context is achieved for the single case and the phenomenon that occurs in it.

Context

In 2016, the Ontario Government released ‘The Kindergarten Program’ as the revised curriculum for kindergarten classrooms, emphasizing play-based learning as the primary means for teaching and learning. The curriculum document emphasizes that play provides opportunities for children to engage in complex thinking and can extend beyond what educators may deem developmentally appropriate (Ontario Ministry of Education,

2016). The assumption made in this document is that all students learn effectively through play yet there is no explicit notion on how students with ASD (or students with exceptionalities) can be supported in a play-based approach to learning compared to their typically developing peers. Similarly, while the document provides a general guideline to kindergarten educators (teachers and Early Childhood Educators) as to how learning through play can happen in their classrooms, it does not mandate that all classrooms look the same or approach play the same way. In this case, the perceptions of play through the teachers' lens and how they perceive learning in kindergarten are crucial to understanding play-based learning experiences for students with ASD.

Recruitment

Upon receiving ethical clearance, participants were recruited through a form of purposeful sampling called snowball sampling. Due to the Covid-19 Pandemic, plans to recruit within one specific school board became limiting. As such, the scope expanded to include certified teachers across Ontario. Inclusion criteria for participants in this research study were threefold: 1) Ontario kindergarten teacher, teaching in a mandated play-based learning program within a publicly funded school in Ontario, 2) at least one student diagnosed (or with a diagnosis in progress) with ASD and, 3) the student with ASD must be integrated into the classroom for at least 80% of the school day. This criterion is essential to understanding how teachers respond to the learning needs of their students with ASD in a play-based learning environment, and how teachers approach learning through play in their classrooms. For this study, a diagnosis in progress is defined as a student that has been identified on the autism spectrum but does not have the

formal diagnosis in place at school yet. With a diagnosis being formalized at the administrative level, it was reasonable to include this in the recruitment criteria.

Participants

Three kindergarten teachers and one resource teacher expressed interest in participating in the study. Teachers 1 and 4 had one student diagnosed with ASD in their classrooms, while Teacher 3 had three students with an ASD diagnosis (or diagnosis in progress). The decision to include one resource teacher (Teacher 2) as an additional participant was made as this teacher had experience teaching kindergarten classrooms specifically for students with ASD and currently holds the role of resource teacher to help teachers with their students with ASD in various kindergarten classrooms. Their experiences were deemed valuable to the study and offered a focused perspective on teaching students with ASD at the kindergarten level. All four teachers offered various levels of experience and professional development that informed their classroom practices and beliefs. Years teaching kindergarten ranged from 5 to 22 years across participants. Two of the four teachers had taken an additional qualification course in kindergarten, whereas three of the four teachers had taken a special education additional qualification. In addition to this, all four participants expressed additional opportunities where they engaged in some level of professional development related to kindergarten (see Table 1).

Table 1*Demographic Information and Professional Development of Participants*

Participant	Teaching Experience	Professional Development
Teacher 1	16 Years in Kindergarten and Grade 1	Primary specialist Special education additional qualification part 1 Self-directed research and professional learning
Teacher 2*	6.5 Years at Kindergarten level	Special education additional qualifications Kindergarten additional qualification part 1 Self-directed research and professional learning
Teacher 3	5 Years in Kindergarten	Special education additional qualification part 1 and 2 Professional development in kindergarten via school
Teacher 4	22 Years in Kindergarten	Kindergarten additional qualification part 1 Professional development in kindergarten via school Self-directed research and professional development

* *Resource Teacher*

Data Collection***Interview Data***

Participants took part in one-hour semi-structured virtual audio-visual interviews that occurred via a password-protected Zoom link. Virtual interviews took place in January and February 2021. The interviews were designed to capture what the teacher was already doing to support the social and academic needs of students with ASD within a play-based kindergarten context (Objective 1). In addition, the interviews also provided

insight into the types of interactions teachers are planning for their students with ASD to capture their perceptions of play (Objective 2). A semi-structured interview protocol (see Appendix A) was selected to ensure that specific questions were being answered directly related to the study's objectives while also allowing flexibility for teacher contributions and probing questions. The interview consisted of eight open-ended questions. A few of the questions had additional prompts that could be used during the interview to help with the flow of the conversations. Four questions directly related to objective 1 (questions 4, 5, 7, 8) , and four questions directly related to objective 2 (questions 1, 2, 3, 6) .

Questions aligned with objective 1 focused on teacher practice such as planning and assessment strategies, expectations for students with ASD in play-based learning, and experiences of social and academic play for students with ASD. Questions aligned with objective 2 focused on the structure of play-based learning in each kindergarten classroom, teacher perception of the role of play, and play engagement for students with ASD.

After receiving verbal consent, interviews were recorded (both audio and video) using Zoom and were later transcribed verbatim. For confidentiality of the participants in the interviews, each participant and all accompanying data were assigned with a study ID number for protection from identifiable information.

Analysis

Interview data for each teacher were analyzed as a single set using verbatim transcripts. The interviews were analyzed as verbatim transcripts so that the voices of the teachers were honoured. Verbatim transcription ensured that each case was respected with detailed descriptions and rich data to its context and setting. Data was thematically

coded through NVivo using a general inductive method based on data-driven codes. Thomas (2006) described a general inductive method to analysis as an opportunity to allow for research findings to emerge through significant or dominant themes implicitly found in the raw data without restraints from structured approaches. It allows for clear links between the research objectives and the findings and develops models of experiences that are evident in the data (Thomas, 2006). Interview data was initially coded by going through each interview transcription, finding commonalities and key phrases in the raw data, and grouping them together into initial broad themes. From there, the interview transcriptions were uploaded into NVivo, where they were coded line by line. The initial broad themes were used during this coding process to organize the data. After this first initial line by line coding, specific themes began to emerge, and the data was subsequently coded further into these themes. What emerged from the raw data were 6 overall themes with several sub-themes (see table 2). The themes established were: (1) Engagement, Connection, and Adaptation; (2) Teaching and Planning Play-Based Learning; (3) Play in the Kindergarten Classroom; (4) Assessment in Play-Based Learning; (5) Perceived Challenges in Play-Based Learning; and (6) Positive Perceptions of Play-Based Learning.

Establishing Trustworthiness

Lincoln and Guba (1985) described a set of techniques used in qualitative data to ensure trustworthiness that was credible, transferable, dependable, and confirmable. I engaged in measures of trustworthiness through the data collection, analysis, and the use of additional coders to ensure reliability. However, it is important to note that the lack of opportunity to collect observational data due to the COVID-19 pandemic inhibited the

ability to use multiple methods to engage in triangulation. Despite this limitation, detailed data was captured from the interviews with four teachers, and the thematic analysis procedure created a rich multicase study with prevalent themes that outlined the similar shared experiences across each case. With detailed interview transcription, the themes that emerged from the data analysis were abundant with description of classroom practice and teacher experience, thus allowing detailed quotes to be used to create a thick description of the perceptions of teachers teaching students with ASD in kindergarten. In addition to the thematic analysis process, additional coders reviewed the data to ensure reliability. As outlined by Creswell and Poth (2018) reliability can be maintained in qualitative research when data and codes are stable across other coders.

Involvement of Additional Coders

Broad themes were initially established by analyzing each interview transcription for patterns or common shared sentiments. From there, each interview transcription was analyzed in NVivo to establish themes and sub-themes from the data. What emerged were six overall themes, each containing several sub-themes (see table 2). Once themes were established, a meeting took place with two additional coders. During the process of data analysis, having additional researchers code parts of the data ensured that the data was demonstrating dependability (Lincoln & Guba, 1985). The two coders were graduate researchers completing a Master of Education. Both were familiar with the field of education, qualitative analysis, and NVivo. In the first meeting with the graduate researchers, the coding process was shared. A sample of the coding process was shared to provide the graduate researchers with context as to how information from the interviews were coded and matched to the themes. Next, the graduate researchers were given a

codebook (which included all the themes and sub-themes) and a document containing two interview questions and their transcriptions. The graduate researchers then worked independently to read through the transcript data and code segments into themes via track changes in Microsoft word. Once complete, the documents were sent back to the principal investigator to review.

When I reviewed the work of the graduate researchers, the majority of the data had been coded the same as my original coding. What differed was that the graduate researchers both had instances where they double coded the data. Whereas in my coding process, I only coded one piece of data under one theme. For example, Teacher 1 shared an experience about their engagement playing with their students with ASD. One graduate researcher coded this experience as both “engagement with adults, peers, and self” as well as “social play and interaction.” Whereas when I coded this section, I coded it exclusively as “engagement with adults, peers, and self.” While the graduate researcher did code it under the same sub-theme as I did, they added an additional sub-theme as well. Once I identified these discrepancies from both graduate researchers, a follow-up meeting took place to discuss them. Any instance where a section of the data was coded under more than one sub-theme, the graduate researchers and I would review this section and decide which sub-theme it belonged under. Once this was complete, all data reviewed was agreed upon by all members.

Ethical Considerations

Ethical clearance was granted by Queen’s General Research Ethics Board, as observed in Appendix B. Eligible participants who were willing to take part in the study were sent a letter of information and consent form via email (see Appendix C). The letter

of information and consent form ensured transparency between the study's overall intent and the objectives. It also ensured that the participants knew why they were being interviewed and the importance of their voice and perspective to the study. Due to the change in data collection because of Covid-19, virtual semi-structured interviews took place over Zoom. Verbal consent was gathered over Zoom using a verbal consent script (Appendix D).

COVID-19 Limitation

Observational data was proposed for this study to gather data from classrooms in person, however, Covid-19 prevented observational data from occurring, thus causing a limitation to this study. This limitation will be discussed further in chapter 5. While observational data can provide rich content about what is happening in kindergarten classrooms with students with ASD, virtual interviews in this study resulted in a detailed description of kindergarten classrooms from the teacher's perspective.

Chapter 4

Research Findings

Introduction

Six overall themes emerged from the data with several sub-themes (see Table 2).

Theme 1: Engagement, Connection, and Adaptation was the most prevalent theme that emerged in the interviews and addressed instances where the teachers discussed successes and challenges with engagement in play-based learning, the connections built between play and learning, and the adaptations needed to create successful learning through play. Theme 2: Teaching and Planning Play-Based Learning primarily covered instances where teachers addressed their teaching and planning practices regarding creating learning through play for students with ASD. Theme 3: Play in the Kindergarten Classroom represented what teachers shared as to how they created moments of learning through play and how their perceptions of play influenced their practice. Theme 4: Assessment in Play-Based Learning highlighted the teachers assessment practices and how that influenced the opportunities they provided for their students with ASD that aided both social and academic development. Theme 5: Perceived Challenges in Play-Based Learning and Theme 6: Positive Perceptions of Play-Based Learning addressed the teachers' perceptions of play and play-based learning and how that informs their personal philosophy of play-based learning in kindergarten. In addition, themes 5 and 6 offered a broader understanding of how personal perceptions of the teacher can inform the way they organize play interactions in the kindergarten classroom. The following section will discuss each of the themes that emerged and how the accompanying sub-themes better informed the data within each theme.

Table 2*Themes and sub-themes*

Theme	Sub-Themes	Research Objectives Addressed
Engagement, Connection, and Adaptation	Engagement with adults, peers, and self Challenges of engaging students with ASD in play-based learning Building connections to learning through play Adapting expectations	RO1, RO2
Teaching and Planning Play-Based Learning	Structure and consistency for students with ASD Planning strategies Adult support in the classroom	RO1
Play in the Kindergarten Classroom	Organization of play and learning in the classroom Navigating inquiry and instruction Social play and interaction	RO1, RO2
Assessment in Play-Based Learning	Assessment strategies and beliefs IEP-driven assessment for students with ASD Challenges with assessment	RO1
Perceived Challenges in Play-Based Learning	An environment of “chaos” Challenges presented by the play-based learning curriculum Challenges teachers experience	RO2
Positive Perceptions of Play-Based Learning	The value of play in kindergarten Flexibility and openness of the play-based learning curriculum	RO2

Theme 1: Engagement, Connection, and Adaptation

All four teachers regularly shared anecdotal stories and teaching practices that focused on engagement, connection, and adaptation. This theme was the largest coded and was the overall central theme present among all four teachers. Building engagement, creating connection, and allowing room for adaptations were the main ideas shared that addressed both research objectives of this study. In addition to sharing how they engaged their students with ASD in play-based learning, they also shared their perceptions of what engagement, connection, and adaptation looks like in their play-based learning classroom. This theme was present in the way teachers shared stories and teaching practices. Four sub-themes emerged under this theme that focused on levels of engagement, challenges with engagement, connections to learning through play, and adapting expectations in kindergarten.

Engagement with Adults, Peers, and Self

Engagement was classified by the level of engagement teachers observed and expected concerning their students with ASD in their classrooms. All four teachers articulated levels of engagement of their students with ASD based on engaging with educators, peers, and with self (playing independently) during play and learning opportunities. When describing the play-based learning experiences that students engaged in, the teachers reported that the students with ASD strongly preferred to engage with adults in a learning activity. In addition, adults would initiate activities to engage these students in play-based learning. This included initiating engagement with peers, as shared by teacher 1:

“They do like to be with the grownups, our littles, and all of them do, our kids with ASD especially in some ways, but all of them like to be with a grownup. So, it does make sense in kindergarten if we want to draw kids in to play with other kids, if we stay in the mix, the kids will come because they like to play where we are, and they like to join what we’re doing.”

Engagement with peers was recognized as important to educators to obtain social goals, but typically only happened if educators initiated or planned the play opportunities. All four teachers shared instances where peer engagement was driven by adults primarily using the preferred interests of the student with ASD, as shared by Teacher 3:

“We know what he likes, we know who he likes. So, he really likes this girl in our class, so if he’s playing at a table, nine times out of ten he’s going to want to be beside her, just by himself, but he wants to be working and playing beside her. So, we try to introduce other kids at that time too, well, ‘you know these people, they also like to play with these types of toys.’”

Engagement with self frequently occurred as students with ASD preferred to engage in play independently or in proximity to their peers but still independently (parallel play). All four teachers shared that their students with ASD typically liked to play independently and that engagement outside of themselves took prompting, modelling, and initiating from educators.

Challenges of Engaging Students with ASD in Play-Based Learning

In addition to addressing moments of engagement for students with ASD, all four teachers also actively shared evidence of challenges experienced with trying to engage students with ASD in play-based learning. As shared by Teacher 1:

“I think that the struggle is always if they’re not interested, they’re not interested. And there is a rigidity there that often means that no matter what we try to do to make it look more fun, if it’s, if they’ve decided they’re not then that’s the end of that. And that can be kind of discouraging in the sense that you spend a lot of time like watching and thinking and trying to figure out what’s going to be this great hook that’s really going to work, and it’s really going to give you this opportunity to build this skill and play this game, and it’s a flat out no go.”

The rigidity and struggle to find ways to engage was also shared by Teacher 4, who stated:

“There’s information, but there’s not a lot of data to work with, and then it’s just hard to get off the ground and then, ‘okay, we have to start again, let’s try this and there’s a lot of that like trying, and then just realizing this won’t work but we’ll keep trying.”

These instances were consistently observed in interviews when asked about the teachers’ struggles when teaching students with ASD in play-based learning.

Building Connections to Learning through Play

All four teachers described connection as the ability to build a connection between play activities and learning for all students, particularly those with ASD. A play-based learning environment relies on creating learning moments driven by play, and all four teachers regularly identified this as moments of connection. Using the preferred interests of students with ASD to build a connection between play and learning (as well as playful interactions with peers) was consistently discussed, as shared by Teacher 3, who stated, “It’s all about taking whatever that student has that is an interest or an entry

point into their learning and expanding it for all students I think is really important.”

Creating a social connection during a playful moment was also highly valued for students with ASD, as evidenced by Teacher 1, who stated:

“Those kinds of moments are huge, and I think even more than sort of the learning side of things is that sort of connection piece, because to have that clear memory of ‘this was funny for both of us together and we enjoyed this moment together’ means that that connection happened, and he felt it and I felt it too.”

Adapting Expectations

All four teachers described adaptation as the need to adapt learning expectations and practices in the classroom to engage better and build connections to learning for students with ASD. Adaptations of expectations were viewed as necessary for students with ASD as their play can look different. Thus, the expectations of play looked different as emphasized by Teacher 2, who stated, “just in terms of the expectations and how often you expect them to play or how long you expect them to play beside somebody else” when asked about the differences in expectations between typically developing peers and students with ASD. When asked about their teaching and planning practices for students with ASD, all four teachers consistently shared that they needed to adapt the learning expectations in the play-based environment to build a better connection to academic and social learning opportunities. As shared by Teacher 3:

“It’s all about being as adaptive as possible and letting go of your expectations of what kids should be doing at every second of every day when you’re doing whatever it is that you’re doing – teaching, lining them up – and allowing for those accommodations. I’m not going to spend hours and all this energy into

doing something that you're not ready for now, and you may not ever be able to do, but you're definitely not ready for it right now. So, let's work where you are."

In addition, three out of four of the teachers also specified that adapting expectations also involved teaching the peers in the classroom about differences in learning and accepting that their peers with ASD might do different activities than them. This was highlighted by Teacher 1, who stated:

"That can be a really hard thing for kindergarten kids to get that those are not the same for everyone. You know, if the expectation is we're all sitting down quietly, and that kid is humming or moving around the room, or still playing with toys, or moving from one of these sub-cohorts to another, and there doesn't seem to be anything stopping them from doing that, that seems for many kids sort of unfair [...] we really, from the get-go, try to establish that we all have different things that we are very good at, and we all have different things that we need to learn so they can kind of start to understand."

This sentiment was also shared by Teacher 4, who shared that the other students in the classroom learned to adapt their thinking to understand that a fellow student with ASD may learn differently than them as, "they intuitively or intrinsically understood that 'I don't need that, but it's okay that that friend needs that.'" The teachers expressed adaptations in terms of the learning experiences in the classroom, but also about their teaching practices, which lead to discussions about how they plan, initiate, and implement play-based learning in the kindergarten classroom.

Theme 2: Teaching and Planning Play-Based Learning

Theme 2 emerged from discussions with teachers about their teaching practices and planning strategies both generally and for students with ASD in play-based kindergarten. This theme is directly related to objective 1, as teachers reflected on how they plan learning activities through play for their students with ASD as well as their own teaching methodologies. Three sub-themes emerged under theme 2: structure and consistency for students with ASD, planning strategies, and adult support in the classroom. When asked about how they plan and initiate play and learning in the classroom regarding their students with ASD, teachers mentioned adult support to guide learning, structure and consistency in expectations, and creating strategies for planning were consistently described.

Structure and Consistency for Students with ASD

Three out of four teachers discussed the need to teach in a more structured and consistent approach for their students with ASD to contribute to better learning success in the kindergarten classroom. As stated by Teacher 2:

“It had to be in a very structured, almost methodical way. We still wanted to incorporate all those opportunities for play but had to really structure it, and almost, you had to really explicitly teach them how to play because the kids’ imaginative play is a lot more challenging for them. [...] you’re trying to find what really drives them and what really interests them, and then kind of repackage it in a structural way that will help them learn the steps really to play and what they actually need to physically do to play.”

Planning Strategies

All four teachers actively discussed how they planned their learning activities in a play-based learning curriculum and how these planning strategies contributed to their ability to engage and build connections to learning for their students with ASD. Teacher 4 described the planning process as very individualized by stating, “It’s very individual. And the range of children with autism, like what works for one isn’t necessarily what the other one might need, and that umbrella is extensive and just responding to their individuality.” Teacher 3 shared a similar idea, emphasizing the individuality in planning by stating, “there’s not a, ‘everybody with autism really likes playing with dinosaurs’ because that’s not true, and that takes away the individual out of it. So, I think it’s all about finding what works for each kid.”

Adult Support in the Classroom

When discussing their teaching practices, all four teachers regularly acknowledged the various uses of adult support in the classroom to engage, build connections, and adapt expectations. Adult support was any role that an adult took on in the classroom to help support learning or the implementation of play activities. Teacher 2 identified a more direct, hands-on approach to teaching play by stating:

“you had to basically be their model, it’s not just about putting them in a corner with some toys and some friends and waiting for them to play, you had to really get down and sit with them and show them, and you know physically play with them and show them how to do it.”

This idea was shared by teacher 3, who emphasized that adult support was sometimes necessary to learn or work on skills. They stated:

“Students with ASD often lack some of those interpersonal or communicative skills that would allow them to really achieve a high success of play with other students because they just don’t get the concepts of maybe say something like not taking something right away, or not throwing something, or saying what you want. [...] Maybe they don’t have those skills yet. That’s when the ECE, or the EA, or myself will work one-on-one with that student in that setting to achieve XYZ.”

When describing what ‘adult support’ looked like in their classrooms, all four teachers included themselves as the teacher, their teaching partner (Early Childhood Educator), and Educational Assistants assigned to students in their classroom. Teacher 3 also included administrators (principals, vice-principals, and Special Education Resource Teachers) within the classification of adult support.

Theme 3: Play in the Kindergarten Classroom

Theme 3 emerged through the discussions with teachers as they shared what play looked like in their kindergarten classrooms. Answers were mainly about their teaching practices on a broader scale. However, some direct information about organizing play in the classroom for students with ASD did emerge in some of the interview discussions.

Theme 3 aligned with objectives 1 and 2, as the organization of play activities in the classroom was discussed (1) and how they navigate learning based on how they perceive play (2). Three sub-themes emerged: organization of play and learning in the classroom, navigating inquiry and instruction, and social play and interaction.

Organization of Play and Learning in the Classroom

All four teachers described the play-based learning opportunities they offered in their classrooms and how they organized their day. Teachers 1, 3, and 4 all described opportunities for play as more of a “free play” approach where learning opportunities through play were wide open and child-directed. Teacher 1 shared, “that playtime piece is really wide open, everything’s open, the centres are all open, the painting is open, and blocks, building like I don’t tend to restrict it at all.” Similarly, Teacher 3 stated, “it was engaging them in play, and allowing them to negotiate that play as well with, I would say, less hands-on instruction from teachers.” Finally, Teacher 4 shared a similar sentiment by acknowledging a lack of restriction on choice of activity and play by stating, “just allowing them to really be who they want to be, and I’m not controlling that.” Teacher 2 shared a more structured approach to play-based learning, emphasizing less child-directed elements and more of a teacher-directed approach where students played within the educator’s prescribed activities.

Navigating Inquiry and Instruction

When discussing what play looked like in their classrooms, all four teachers acknowledged that their practices involved trying to navigate (or balance) moments of inquiry with more direct, teacher-led instruction. This balance was sometimes challenging, but there was a focus on embedding moments of direct instruction into play or moments of inquiry. This was highlighted in an example shared by Teacher 3:

“We still always have some form of academic stuff available because kids are really drawn to that, they really want to be in a writing centre, or they want to be working in a math-type game situation. So, we purposely plan those as options, and I think that’s the key that it’s always open like you can sit there and play with

blocks all day long. I don't care if you want to play with blocks all day long. I'm going to present you with eight other options, and I'm going to go, "hey, do you want to play with me over here?" and you can say no or whatever. But at the end of the day, if you're going to play with the blocks, I know at some point I'm going to come over and go, "well how tall is that block? How many..." I start asking those types of questions and embedding more learning, academic learning, into play."

Teacher 1 shared this sentiment by stating:

"The kids come up with something, and we will follow their lead and go for it, and so we, I mean we have a fair bit of direct instruction that happens in our day too, so it's sort of a balance, it's really not a 'choose your own adventure' kind of world other than that sort of 1 to 2 hours of really wide open, unstructured play."

Social Play and Interaction

The third sub-theme to emerge involved direct discussion about moments for social play and interaction within the organization of play-based learning in the classroom. While all teachers used the language of social play and interactions in their answers, only two of the four teachers explicitly discussed the direct connections between how they organize play in their classrooms and how this contributes to fostering social play and interactions among peers. Teacher 1 spoke about social play as it pertains to helping students navigate social interactions with peers in an appropriate way. They shared, "they often don't have the words, but we can provide them and give them a really clear sample sort of what to say so that they can get their meaning across, and some kids are really hands-on, and that can be tricky to break." Teacher 2 spoke about the value of

outdoor play to help develop social interactions with peers and navigate more complex social behaviours. They stated, “a big part of our play was outdoor play because the kids really needed the physical, the movement breaks. So that was really kind of more, more social, more open-ended for sure where we just kind of let them direct themselves.”

Through discussion about play in the kindergarten classroom, each teacher shared instances where the organization of the classroom affected the play opportunities, navigating inquiry affected classroom instruction, and the importance of social play and interactions during play. In addition to understanding how play is organized and navigated in the classroom, assessment was also a prevalent theme as it pertained to play-based learning.

Theme 4: Assessment in Play-Based Learning

All four teachers discussed what assessment looked like in their play-based learning classrooms. While all four teachers discussed assessment on a broader scale in their classroom, assessment pertaining to their students with ASD was integrated into their interview answers. This theme emerged from the discussions with teachers about how they plan their assessments for students with ASD through a play-based pedagogy. Theme 4 aligned with objective 1, as teachers discussed assessment based on their practice and what they chose to utilize as effective assessment strategies in play-based kindergarten classrooms. Three sub-themes: assessment strategies and beliefs, IEP-driven assessment for students with ASD, and challenges with assessment.

Assessment Strategies and Beliefs

All four teachers discussed their assessment strategies and beliefs when asked about what assessment in play-based learning looks like in their classrooms. Assessment

in play-based learning was described as anecdotal and relied heavily on audio/visual style documentation. Teacher 1 shared:

“Often we use our phones to take photos or little video clips really frequently at school, and I often will take pictures, and then I use pic-collage to sort of put a few pictures together and write a little tiny story that goes with it, so I can throw in a direct quote, or I can throw in some context a little bit so then the pic-collage then becomes the story. So, for writing a report card, those tiny little moments that happened and mattered are captured, and the story is attached to them, so it’s easy to remember the details.”

Taking photos and anecdotal notes were valuable as they captured moments of learning without interrupting play. In addition, it offered opportunities for teachers to reflect on what was occurring at the moment and capture successful social moments for a student with ASD, as articulated by Teacher 2:

“So when I did go back and look at my photos, like oh my goodness, I didn’t even catch that, I was taking a photo of one student doing something, and then I caught the other one laughing and looking at them and paying attention to them. I could use those images in their assessment.”

There was little differentiation between assessment goals for typically developing peers and students with ASD because of the individual nature of assessment in kindergarten classrooms.

IEP-Driven Assessment for Students with ASD

When asked about assessment specifically about students with ASD, the overall assessment experience in kindergarten did not vary from typically developing peers.

However, three out of four teachers did acknowledge that when students with ASD were assigned an IEP in kindergarten, it did create minor differences in terms of what goals the teachers had to work towards and subsequently informed their assessment practice for that student. This sentiment was shared by Teacher 3, who stated, “in terms of assessment for them [ASD], it may be a lot more of really zooming in the focus on a specific, specific thing for their IEP goal.” Teacher 4 shared this sentiment by stating, “the assessment part is very much driven by the IEP and making sure that those goals are met, and that we keep building on those.”

Challenges with Assessment

In addition to sharing their assessment practices, three out of four teachers shared challenges they have experienced when trying to assess students with ASD in the play-based curriculum. While the following theme, “perceived challenges in play-based learning,” discusses challenges teachers experienced, the decision was made to make challenges with assessment a sub-theme as these challenges were specific to assessment and assessment practices in play-based learning. Thus, this justified a separate sub-theme under the larger theme of assessment in play-based learning. However, these would also be considered perceived challenges, but the assessment discussion took precedence in these instances. Teachers 1, 2, and 4 shared that the challenges they experienced when assessing students with ASD involved lack of engagement, lack of connection to the learning activity, and over-stimulation from the kindergarten classroom. Teacher 2 shared:

“To use the way they play as a way to assess what’s in there I don’t think is necessarily best for them because they are going to be overwhelmed, they’re

going to be overwhelmed by the sensory, the noise of the peers, and just so many other factors against them, so just because they're not demonstrating the play and the language and the behaviour that you're supposed to be observing, yeah I don't think is going to be a realistic snapshot."

While teachers shared evidence of challenges during assessment in play-based learning, that was not the only challenge discussed, which thus lead to the fifth theme on the perceived challenges that teachers experienced in their classrooms.

Theme 5: Perceived Challenges in Play-Based Learning

This theme emerged from discussions with all four teachers about their teaching practice in a play-based learning classroom and what challenges they experienced or felt impacted them. Theme 5 aligned with objective 2, as challenges experienced by the teacher in the kindergarten classroom were based on their perceptions and thresholds for play-based learning. What emerged were three sub-themes that captured the perceived challenges that teachers experienced teaching in a play-based learning pedagogy in kindergarten. Particular attention was paid to what challenges they experienced both personally and from the curriculum itself when trying to meet the needs of their students with ASD in a play-based style of learning.

An Environment of "Chaos"

Three of the four teachers used the language of "chaos" when asked to describe their play-based program and whether it is a supportive environment for students with ASD. In this context, the various complexities of the kindergarten classroom and issues that are out of the control of the teacher contributed to a feeling of "chaos" at times in the

classroom, and thus insinuated that this chaos, in turn, might not create as supportive of an environment for a student with ASD. Teacher 1 shared this feeling by stating:

“If what they’re learning is chaos, it’s not helpful. And it can be really hard to sort of undo that learning afterwards when they have had two years of a sort of chaotic experience. [...] You have 31 or 32 then it, that chaotic feeling doesn’t go away enough, and it’s, you just feel like you’re managing the crowd.”

Teacher 3 shared a similar sentiment and articulated the struggle to manage the needs of their students with ASD when they first joined the kindergarten classroom while also managing the entire class. They stated:

“For the first little bit of that transition period, I just wish there was somebody that could come in, [...] like help me do my job to incorporate them and find out what works best for them. Don’t make me figure out what works best for them while I’m trying to maintain the chaos of the other bunch of kids. Anybody who says that a kindergarten classroom isn’t chaos ... it’s controlled chaos, but it’s absolutely chaos.”

Challenges Presented by the Play-Based Learning Curriculum

When asked about the play-based learning curriculum and what they found challenging, all four teachers shared instances where the program itself and its organization have caused specific challenges that have led to difficulty in allowing their students with ASD to access the curriculum like their typically developing peers. Teacher 2 acknowledged that the philosophy of the play-based program was not an issue; it was more how play opportunities were packaged for students with ASD. They stated:

“I think the open-endedness of the exploratory centres, they don’t know where to start and they don’t know where to end in those types of activities. It’s not that they don’t want to appreciate the materials, and they wouldn’t appreciate the activities; it’s just how it’s packaged to them. Not the right packaging.”

Teacher 3 shared that the kindergarten program itself does not necessarily present immediate challenges; the lack of support causes issues to emerge and makes the program less accessible in a kindergarten classroom. They stated:

“The program itself, I think, lends itself to any type of learner because it is, again, so expansive, and it has so many different ways of reaching every learner. But, when you don’t have the ability, as the educator, to get the supports you need to do those things, then you’re kind of failing everybody, especially those kids that have an exceptionality, especially those kids that aren’t neurotypical.”

Challenges Teachers Experience

In addition to sharing challenges presented by the curriculum itself, all four teachers articulated personal challenges that they have experienced when trying to meet the needs of their students with ASD within a play-based learning pedagogy. All four teachers spoke at length about issues that have presented personal challenges for them to overcome as educators to support the learning needs of their student(s) with ASD to help them access learning through a play-based lens better. Teacher 4 shared that the limited interests of students with ASD presented challenges for them as an educator to meet their needs through play-based learning. They stated:

“Sometimes they are so focused on dinosaurs that’s the whole thing all year long. So, trying to make it expand on that is sometimes difficult like, ‘I get so hooked

on this, that's the only thing I'll talk about and don't talk to me about anything else' and so as restrictive as it is, it's trying to you know work with that and make it more encompassing, that's hard.”

Teacher 3 shared that a personal challenge for them was navigating the transition to kindergarten for students with ASD and the subsequent struggles with behaviour and communication. This impacted the ability to engage in traditional forms of play-based learning. They stated:

“We didn't know any of his behaviours [coming in as a new student]. So, you're coming in, and you're like, what is going on right now, I don't know how to help you, all I know is that you are screaming, all I know is that you are in crisis mode right now and I don't know what to say to you, what do you need, you don't have the ability to communicate what you need, now we've got to figure this out.”

While challenges in the kindergarten classroom were shared by all four teachers, they also shared instances of positive perceptions of play-based learning and how they value play in their practice.

Theme 6: Positive Perceptions of Play-Based Learning

In addition to the challenges observed, all four teachers also spoke at length about their positive perceptions of the play-based learning curriculum and why they value it as an educator. Theme 6 aligned with objective 2, as the positive perceptions of play and play-based learning were shared by each teacher and subsequently discussed how these perceptions impacted their teaching with regards to their students with ASD. Two sub-themes emerged from these discussions, which indicated that all four teachers both saw

the value of play in kindergarten as developmentally important and applauded the program for allowing flexibility and openness in terms of learning and assessment.

The Value of Play in Kindergarten

When asked about their perceptions of play-based learning in kindergarten, all four teachers articulated that it is the best form of learning at a kindergarten level, it is developmentally appropriate, and it provides a more holistic view of what children know and how they can learn. Teacher 1 shared, “I think play is when we really see what kids know, and how kids sort of interact with other people, and how they perceive the world, and it’s this opportunity then to nudge it just a little wee bit.” This sentiment was shared by Teacher 4, who stated, “It’s the only way to learn, it really is. Seeing how they solve problems, how they work through things, I could not read a book that can teach them what they learn from that interaction with each other and the message that it’s given to them.” The value of play was described by all four teachers broadly in that they shared what they valued for themselves as an educator and what they wanted to see in their classrooms.

Flexibility and Openness of the Play-Based Learning Curriculum

When explicitly asked about implementing the play-based learning curriculum and meeting the needs of their students with ASD, all four teachers shared that the flexibility to adapt their teaching and assessment practices, and the openness of play and what it can look like contributed to a more positive perception of the curriculum and the success it can offer. Teacher 3 saw the value of having an open-ended curricular document to offer flexibility in executing it. They shared:

I think that the delivery of the program varies so much from room to room, from board to board, from educator to educator that I think that the document itself is supportive of students with ASD. [...] The document itself is very open-ended. It's like – the way I see it anyway – I can pretty much do whatever I want, whenever I want to in the classroom because it's going to attain one of those 36 learning goals.”

Conclusion

The six themes presented highlighted the topics and beliefs shared by all four teachers. Teachers shared their teaching, planning, and assessment strategies and beliefs when teaching students with ASD alongside their typically developing peers in a play-based kindergarten classroom. Through these discussions, perceptions of play and its value in kindergarten emerged. However, perceived challenges shared by the teachers that occurred in the kindergarten classrooms highlighted several struggles for helping students with ASD to fully access the play-based learning program like their typically developing peers. Finally, the theme of ‘engagement, connection, and adaptation’ was the most prevalent theme observed and regularly integrated across all interview responses and discussions. This theme will shape the following discussion of results.

Chapter 5

Discussion

Introduction

There is a need to understand what teachers are doing to meet the needs of students with ASD in play-based kindergarten classrooms. ASD is a neurodevelopmental disorder that causes impairments in social interactions, communication, and language, and thus impacts play behaviours and peer interactions for young students in kindergarten (APA, 2013; Hart & Whalon, 2013; Barton et al., 2019). With the move to a mandated play-based learning curriculum for kindergarten classrooms across Ontario in 2016 (Ontario Ministry of Education, 2016), research was needed to understand the experiences and perspectives of teachers and how they attempt to meet the learning needs of students with ASD through a play-based lens. The focus of this study was on teacher practices and perceptions. Interviewing kindergarten teachers provided a clear understanding of their teaching practices and perceptions of play-based learning pertaining to teaching students with ASD. What emerged from this study was an array of personal pedagogies and practical implications for play-based learning that presented shared approaches to making the play-based learning curriculum accessible for students with ASD across the four teachers.

Research indicates that a structured or systematic approach to learning is beneficial for students with ASD, particularly in early primary contexts, as it can increase social play behaviour and build academic learning outcomes using explicit instruction (Wong et al., 2013; Jung & Sainato, 2015; Kamps et al., 2015; Nelson et al., 2017; Maich et al., 2018; Gilmore et al., 2019; Barton et al., 2019). The research that outlines play and

play-based learning as best practice for kindergarten, and subsequently has informed the pedagogy of the Ontario kindergarten curriculum, moves away from a structured, teacher-directed approach to teaching, and adopts a more developmentally appropriate approach to learning that utilizes forms of inquiry and child-directed play (Ashiabi, 2007; Van Oers & Duijkers, 2013; Pyle & Bigelow, 2015; Pyle, DeLuca, & Danniels, 2017; Pyle & Danniels, 2017). Utilizing a multiple case study to better understand the experiences of teachers in kindergarten, each teacher was considered a case, with the goal being to determine similarities and differences among teachers. Similarities emerged among teacher perceptions of play and its challenges, and how they teach and plan for students with ASD. While there is differing perspectives as to a clear-cut definition of play, it is typically described by the observable behaviour of children while engaged in the act of play, and also by the format of the play environment and how it has been negotiated (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; Van Oers & Duijkers, 2013; Weisberg & Gopnik, 2013). The teachers in this study conceptualized play in their classrooms based on the format it took place in, and the subsequent playful behaviour that emerged within that format. Subtle differences emerged based on the implementation of their play-based curriculum in the classroom, and the way play was structured for all students. While each teacher executed play-based learning differently, the response to students with ASD was consistently similar. Hearing the experiences and practices of the four teachers exemplified that while curriculum implementation may be unique to teacher and classroom, the experience of teaching students with ASD within a play-based lens may lead to a similar experience across cases.

This chapter focuses on the discussion of research findings and offers insights to address the existing gap in knowledge as identified in the literature review. The research objectives (outlined in Chapter 1) will guide the discussion of this paper:

1. To examine how teachers are supporting the social and academic needs of students with ASD in a play-based environment.
2. Examine how teachers' perceptions of play influence the types of interactions they play for students with ASD.

To address these objectives, this discussion is framed within two parts: (a) supporting students with ASD in the kindergarten classroom and (b) examining teachers' perspectives of play and play-based learning. The interviews with the four teachers offered valuable insight and depth into their practices and beliefs, and their experiences and examples will be shared to address the objectives better. The themes that emerged in chapter 4 will be present throughout the discussion, but particular attention will be given to the central theme that emerged: engagement, connection, and adaptation. This theme was the most prevalent, and the examples and experiences shared within this theme provided a strong rationale for what support for students with ASD looks like in kindergarten. In addition, the perceptions of play and perceived challenges teachers faced provided a rationale for how teachers navigate their play-based classrooms. Implications of the research, limitations of the study, and recommendations for future research will be examined following this discussion.

Objective 1: Supporting Students with ASD in the Kindergarten Classroom

Engagement: Building Social Connections

Students with ASD in kindergarten show marked differences in engagement compared to their typically developing peers (Hart & Whalon, 2013; Jung & Sainato, 2015; Maich et al., 2018; Barton et al., 2019; Gilmore et al., 2019). They present with atypical play behaviours, struggle with navigating diversity in play, and communication can be challenging when navigating complex play behaviours with peers (Honey et al., 2007; Hart & Whalon, 2013; Barton et al., 2019). The literature on play emphasizes its developmental appropriateness at a kindergarten level and benefits young students' social, emotional, and cognitive growth (Ashiabi, 2007; Howard & McInnes, 2013; Weisberg & Gopnik, 2013; Karia, 2014; Pyle & Danniels, 2017). One of the most prevalent words used was engagement during the interviews with the each of the four teachers. 'Engagement' was used as a marker of success for academic learning, social interactions, and play. When students displayed active engagement during a learning activity, in play, or with others in the classroom, the teachers consistently viewed this as successfully accessing the play-based learning curriculum. This meant that the teachers believed the play-based curriculum offered flexibility that allowed for various levels of engagement to count towards success. The curriculum itself allowed for this flexibility and thus allowed the teachers to find ways to create accessible moments for engagement. The term engagement was primarily used when discussing the social interactions and play moments in which typically developing students and students with ASD participated. Navigating social nuances is challenging and at the core of the ASD diagnosis (Hart & Whalon, 2013; Kamps et al., 2015; Gilmore et al., 2019), so it was natural to hypothesize that engaging with peers would present challenges for students with ASD in the classroom. All four teachers identified this as a struggle and required

more adult participation to build engagement between students with ASD and their peers. Given that social goals were important to the teachers, it made sense that engagement with peers would, in turn, be considered successfully accessing the play-based program. When the students with ASD would build a connection with another peer and begin to engage with them in a playful way, the teachers articulated that moment felt personally successful for them as an educator. The students with ASD were most comfortable engaging in play by themselves. Their restricted interests would present challenges to the teachers when they would try to widen the scope of play or social engagement. This observation was similarly seen by Gilmore et al., (2019), who acknowledged that restricted interests and self-stimulatory behaviours had been a significant impediment to peer engagement in social settings.

While engagement was highly valuable, it was found that the educators largely drove engagement. The kindergarten curriculum utilizes four frames to structure learning and assessment in the kindergarten classroom within a play-based lens (Ontario Ministry of Education, 2016). Within this document, there is a strong emphasis on utilizing inquiry (child-led) to guide learning and allow for the natural ways children explore their world and create meaning through play (Ontario Ministry of Education, 2016). Inquiry is also part of the continuum of play-based learning conceptualized by Pyle and Danniels (2017), where it is considered a more child-directed element of a play-based environment. Child-directed forms of play-based learning can be more challenging for students with ASD as there is not necessarily a prescribed task or expected outcome of an activity (Kamps et al., 2015; Maich et al., 2018; Barton et al., 2019). The teachers identified that inquiry was not utilized in a traditional sense for students with ASD

compared to their typically developing peers, as their restricted interests and limited social skills contributed to a different experience than typically developing peers. In acknowledging this difference, the teachers still felt that the curriculum itself was expansive enough to allow them to lead or model engagement for their students with ASD. All four teachers shared examples of how they would initiate a play activity with their students with ASD and guide them through how to play or the steps involved with the activity. Initiation from an adult was needed for the student with ASD to engage with the materials, activities, or their peers. While these experiences were unique to the teachers in this study, similar sentiments on play complexity and peer play interactions for students with ASD were prevalent in the literature. Barton et al., (2019) found that levels of functional play were prevalent, but the children with ASD did not engage in play or diverse play experiences unless they were explicitly taught or engaged by the instructor. This study highlighted the need for a structured teacher-led interaction to guide instruction, which was similarly observed by Kamps et al., (2015) and Maich (2018), who found that social engagement with peers in play contexts was more advantageous when the educator led the engagement.

The literature on ASD acknowledges that social impairments provide the biggest challenge for students on the spectrum (Hart & Whalon, 2013; Kamps et al., 2015; Jung & Sainato, 2015; Nelson et al., 2017; Maich et al., 2018; Barton et al., 2019; Gilmore et al., 2019). Areas such as understanding relationships, navigating nonverbal communication, and social-emotional reciprocity can present challenges with engagement (APA, 2013). While there were positive associations with the word ‘engagement,’ there was also evidence that failure to engage or struggles with

engagement were prevalent. When teachers struggled to engage a student with ASD in play or felt that an activity failed to reach the student, they felt it was challenging to navigate. The most considerable disconnect between the play-based curriculum and the ability to engage a student with ASD resulted from not knowing the entry point. This means that each student has an 'entry point' into their learning or something that builds an implicit motivation to learn. Part of understanding this entry point is through communication and inquiry driven by the students. In the literature on ASD in kindergarten settings, some studies utilized interventions that targeted engagement with learning activities and social interactions (Jung & Sainato, 2015; Nelson et al., 2017; Gilmore et al., 2019). Nelson et al., (2017) found that when motivating materials were utilized, students with ASD had a higher interest in the activities presented to them and thus displayed increased levels of engagement. Similarly, Jung and Sainato (2015) used a video modelling intervention to teach games to young children with ASD in kindergarten and found that using their unique interests (or what was motivating for them) increased their engagement with the game and with their peers. Social engagement in play activities was another area that provided a challenge for the teachers in this study. As observed in Gilmore et al., (2019), navigating complex social play, such as playground activities, was difficult for students to manage and thus made engagement more challenging for them. The teachers in this study shared that when a student presented with social and communication difficulties, understanding what the entry point was (or what motivated them to engage) became challenging. Teacher 4 referenced not knowing the history of what interests and strengths students with ASD have when they come to school. Teacher 3 shared that the transition to the kindergarten classroom for the student with ASD made

it challenging to find ways to engage when the priority was addressing their basic needs and comfort level in the classroom. When the entry point to learning became difficult to find, engagement became harder to achieve successfully. When engagement became challenging, it became more complicated for the teachers to create successful play-based learning moments for their students with ASD. While the curriculum itself is flexible and lends itself to various learners (Ontario Ministry of Education, 2016), it does not account for the challenges that can occur when the entry point to engagement is not always evident. Thus, this created a disconnect between what the teacher perceived as successful engagement in play-based learning and the level of engagement students with ASD might have through play.

Connection: Creating Meaningful Play

The purpose of inquiry-based learning, and subsequently the basis of play-based learning, is to develop a connection to learning for students through ways deemed developmentally appropriate (Van Oers & Duijkers, 2013; Ontario Ministry of Education, 2016; Pyle & Danniels, 2017). In addition to engagement, connection was another prevalent word used throughout the interviews with the teachers. The ability to build a connection to learning through play was at the core of the beliefs of all four kindergarten teachers. Thinking back to the idea of entry points to learning as markers of success for engagement, connection was identified as a bridge to building this entry point. When a connection could be made between a playful activity and a learning objective, it reinforced the learning that happened. Students with ASD tend to have restricted and specific interests (Honey et al., 2007; Hart & Whalon, 2013; Jung & Sainato, 2015; Barton et al., 2019). Utilizing these interests created an entry point for play and

subsequently built a connection to learning. Wallerstedt and Pramling (2012) expressed the value of the connection between play and learning as it illustrated the potential young children have at developing competencies in areas of learning. When children build a connection through play, they are showing an intrinsically motivated action connected to practice (learning goal), and thus paving the way to creating more novel forms of playful connections (Wallerstedt & Pramling, 2012). When the teachers engaged in play using the preferred interests of their student with ASD, the student was more likely to want to continue the play or generalize the play to other people or contexts. As shared by Teacher 3, their student with ASD had a very niche interest in cats. Teacher 3 utilized this interest to create play activities with the theme of cats. When teacher 3 did this, the student with ASD wanted to engage with these activities. The other students in this class started to show an interest in these activities, and soon they were doing whole group activities centred around cats. Eventually, the student with ASD would participate in activities with his peers based on the connection built through his interest in cats. He was able to generalize from participating in an independent play activity about cats to engaging in group learning with his peers. A connection was built based on his initial interest, created an entry point, thus creating social engagement with his peers. Children engage in play when it has meaning to them, and this meaningful connection can build areas of play, such as cooperative play, as well as inform the teacher as to how to maintain connection and engagement (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Van Oers & Duijkers, 2013; McInnes et al., 2013).

When discussing how connection can happen for creating entry points to learning, there was evidence among three teachers that structure and consistency provided better

learning outcomes for students with ASD. A structured approach for students with ASD utilizes intentional instruction to target desired learning objectives for better skill attainment and generalization of skills in the classroom (Wong et al., 2013; Jung & Sainato, 2015; Maich et al., 2018; Barton et al., 2019). Various forms of structured tasks are described as evidence-based practices that best support students with ASD in the classroom (Wong et al., 2013), and several studies have highlighted that using a structured approach when instructing students with ASD contribute to better success in learning (Hart & Whalon, 2013; Jung & Sainato, 2015; Maich et al., 2018; Barton et al., 2019). Teacher 2 had significant experience working in special education classrooms at a kindergarten level with students with ASD. The experiences in those classrooms drastically differed from the experiences of a traditional play-based learning classroom. Teacher 2 emphasized the need for a methodical approach to planning and teaching. The play activities needed to be structured so that the instructions were clear and explicit and there was a clear beginning and end. This was seen in the research, as children learned most effectively when a task had predictable instructional context, was explicit in its teaching and expectations, and created a clear beginning and end (Jung & Sainato, 2015; Maich et al., 2018; Barton et al., 2019). Similarly, when the expectations are made explicit for the student, and there is a clear guideline for the student to understand what is expected of them, the ability to engage in more diverse forms of play (Barton et al., 2019) and expand their social engagement (Hart & Whalon, 2013; Kamps et al., 2015; Maich, 2018) were more evident. Likewise, two additional teachers also acknowledged strategies that used more explicit teaching and teacher-led instruction for their students with ASD, such as visual schedules and modelling play behaviours during an activity. This tied back

to the idea of adult-led engagement in play. There needed to be a guide for students with ASD to navigate the play activity, and in turn, explore and build a connection to it (Jung & Sainato, 2015; Kamps et al., 2015; Maich et al., 2018; Barton et al., 2019).

The idea of creating meaningful connections to learning through play felt possible for the kindergarten teachers due to the nature of their planning and teaching strategies. A large portion of the interview discussions centred around the teachers' planning practices and how they felt they could plan learning activities through play for their students with ASD. The openness of having a flexible curriculum influenced all four kindergarten teachers to plan in an individualistic way. They focused less on planning for the classroom as a whole, and focused more on working at the level that the student with ASD was at academically and socially and building from there based on the student's needs. Given that the nature of the ASD diagnosis is complex and individual (APA, 2013), it made sense that planning for a student with ASD was individualized to best suit their needs in kindergarten.

Adaptation: Making Play-Based Learning Accessible

The third concept that emerged among the interviews with all four teachers was conversations about adaptation. Adaptation was used to describe how learning activities were planned to be individualistic or how the teachers approached their teaching practices for students with ASD. The play-based curriculum itself felt flexible and expansive enough that the teachers could build engagement and connection that worked within the interests of the student with ASD based on their 'entry point' to learning. When speaking about play as observable behaviour of the actions of children, play can be considered flexible and fluid, as it is concerned with means rather than end (Ashiabi, 2007;

Wallerstedt & Pramling, 2012). What emerged as a common concern was that students with ASD present with unique and complex needs that are not necessarily directly referred to in the play-based curriculum. Such areas of concern of complex needs include social and peer relationships (Kamps et al., 2015; Gilmore et al., 2019), the challenges with play behaviours or diverse play sequences (Barton et al., 2019), and restricted or limited interests (Honey et al., 2007; Nelson et al., 2017).

The curriculum is flexible (Ontario Ministry of Education, 2016), and that flexibility is celebrated among teachers. However, it does not account or provide direction for the complex exceptional needs students may present with, such as students with ASD. Therefore, it can feel limiting in its approaches to foster successful engagement and connection when challenges are encountered in the classroom. To mitigate this, the teachers regularly adopted the notion of adapting expectations for the students with ASD, their experience as learners in the classroom, and their relationships with their peers. Adaptions are frequently observed in research on play engagement in young children with ASD, as interventions are typically executed to help students with ASD build skills related to play, engage in play contexts with peers, and drive more connection to learning in prescribed, playful ways (Wong et al., 2013; Jung & Sainato, 2015; Kamps et al., 2015; Nelson et al., 2017; Barton et al., 2019). As shared by Teacher 1, a typical example of this was the idea that while carpet time is a necessary expectation for the students in kindergarten, an adaptation was necessary if the student with ASD could not attend or sit on the carpet to engage in the activity. Sitting at the carpet was an expectation for all the students in the classroom. However, if the student with ASD could not engage with that expectation successfully, it was adapted so that the level of success

matched their level of learning and engagement. The way the teachers shared examples of how they approached play in the classroom emphasized various moments where adaptations happened. Teacher 3 shared examples of having to let go of what they expected of students with ASD when they were engaging in play-based learning activities and instead work at the 'entry point' or the level that the student was able to engage in successfully. Adaptation in this sense involved understanding their perceptions of play, how they interpret the play-based curriculum for their pedagogy and being willing to adapt that to help their students with ASD access learning through play at a level that makes sense for them. While some of their typically developing peers may be engaging in complex social negotiation while having a tea party in the dramatic play centre, the student with ASD may prefer to be scooping beads back and forth between cups with direction from an adult. There is a difference in the type of engagement in these two activities, as one is socially-driven with peers while the other is more task-driven. However, they both can create meaningful connections to learning when the expectation for learning is adapted to accommodate this difference. This also further supports that adaptations for students with ASD rely on teacher-driven directions to help structure play in way that makes sense and prompts more opportunities for connection through play (Kamps et al., 2015; Maich et al., 2018; Barton et al., 2019). There was evidence that the ability to adapt play-based learning in the classroom and accommodate for the differences in expectation and engagement may create a tension between what is in the curricular document and how teachers can implement it in practice.

Another form of adaptation observed among the interview discussions with the teachers was the need to adapt the expectation of social interactions between students

with ASD and their peers, and teaching the typically developing peers to understand these adaptations. The social play environment holds a valuable role in identifying the social frustrations and difficulties experienced during play for students with ASD (Hart & Whalon, 2013; Kamps et al., 2015; Maich et al., 2018; Gilmore et al., 2019). Children with ASD tend to engage in solitary play as the social demands of social interactions with peers during play can be challenging to navigate (Hart & Whalon, 2013; Gilmore et al., 2019). Differences in activity, in play, and in expectation can be tricky to navigate for students who may not understand why. Several teachers shared examples of having to teach students in the classroom about equitable education, such that not everyone comes to school ready to learn the same things. Teacher 1 spoke at length about the need to teach typically developing peers to adapt their way of thinking regarding fairness and expectation. Teacher 1 said it was crucial to model that everyone works at their own level, and sometimes play and expectations can look different for their peers. In this context, ‘working at their own level’ did not imply a perceived hierarchy of play skills but rather a perceived difference in how students engage in the complexity of play-based activities. This adaptation was crucial to building social relationships in kindergarten for students with ASD. It established a community among the students in terms of understanding differences and variations in play. Teacher 4 saw that once the children started to understand these equitable ideas, they were more likely to understand that while they might not need to learn something because they already know it, their peer with ASD might need to learn it. It created more room for social engagement because they wanted to work with the student with ASD and help them with tasks. This form of adaptation was complex, and while not necessarily addressed in the curriculum, was a

regular occurrence among the interview discussions with the teachers. This adaptation saw the increase in peer-peer social interactions when typically developing students were taught about difference in expectations, and in turn provided more social opportunities for students with ASD to engage with their peers (Kamps et al., 2015; Maich et al., 2018; Barton et al., 2019; Gilmore et al., 2019).

The last example of adaptation shared by the teachers came from the discussions about assessment. While assessment was not necessarily a focal point of this study, how teachers assessed their students with ASD was discussed and fell under the category of adaptation. Assessment itself felt very fluid for the teachers in that they all engaged in documentation through pictures, videos, and anecdotal stories to capture evidence of learning, as supported by the policy document (Ontario Ministry of Education, 2016). This form of assessment remained constant among all teachers and for all peers, including students with ASD. Where adaptation came into play was the expectations that teachers assessed for their students with ASD. The use of IEP's for students with ASD in kindergarten emerged among all four teachers, which influenced what expectations they chose to focus on for assessment. They would adapt their activities and assessment to target any skills that were identified in the IEP.

Objective 2: Teacher Perspective: Perceptions of Play and Play-Based Learning

The Value of Play

At the core of the kindergarten teachers' perceptions was the inherent value of play as necessary for learning in kindergarten. Teacher perceptions can largely influence how they teach play-based learning in their classrooms and the value that it holds for them (Pyle, DeLuca, & Danniels, 2017; Pyle & Danniels, 2017; Timmons, 2017).

Research on teacher perceptions emphasized that the expectations teachers have for their students during play are informed by their beliefs for decision making, planning learning opportunities, and interactions within play-based learning (Timmons, 2017). Aside from the play-based curriculum, the value of play was discussed and was deemed a necessary context and skill for learning in kindergarten for 4- and 5-year-old students. The idea of play as a crucial learning context was highly valued, as complex and unique forms of inquiry, exploration, and learning emerged within the context of play as previously seen in research (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Weisberg & Gopnik, 2013; Van Oers & Duijkers, 2013; Pyle & Danniels, 2017; Pyle, DeLuca, & Danniels, 2017). Similarly, teachers also valued play as a skill, in that students created more meaningful learning connections when the learning occurred as a playful opportunity. The structure of their classrooms allowed for ample amounts of time for play, and often integrated large portions of free play (or wide-open play) so that the students could learn through activities that were implicitly motivating them. Despite the challenges that they encountered teaching students with ASD, the value of play was at the core of the teachers' perceptions in kindergarten. Play was open enough to draw students in, and as shared by teacher 1, could 'nudge' a deeper connection to learning. Play offered opportunities for students to build engagement and connection and navigate it in a way that made sense to them. It allowed the educators' ample opportunities to expand or extend the play to encourage further academic learning (McInnes et al., 2013; Van Oers & Duijkers, 2013; Pyle & Danniels, 2017).

Navigating Chaos: Addressing Challenges in the Play-Based Classroom

The play-based learning curriculum is flexible and open, providing ample opportunities to create a play-based classroom that can reach various students in various ways (Ontario Ministry of Education, 2016). All four teachers shared this sentiment and their inherent value of play was evident in their teaching practices. However, there was evidence of challenges that the teachers encountered, both from the program itself and personal teaching challenges, that warranted some discussion on areas that were perceived to be frustrating. Creating a structured environment to teach skills is what works well for helping students with ASD achieve success in learning (Hart & Whalon, 2013; Jung & Sainato, 2015; Kamps et al., 2015); however, this can be difficult to execute in an environment that can be highly unstructured, values free play and child-directed learning, and emphasizes student inquiry to guide instruction (Pyle & Danniels, 2017). The possibility for a disconnect was discussed, and rather than a disconnect between understanding best practices for students with ASD, there was evidence of a tension that existed for teachers. This tension emerged between knowing that their students with ASD need adaptations made to access engagement and connection (Wong et al., 2013; Hart & Whalon, 2013; Nelson et al., 2017; Barton et al., 2019), knowing what the play-based learning curriculum expects (Karia, 2014; Pyle & Bigelow, 2015; Ontario Ministry of Education, 2016; Pyle & Danniels, 2017), and trying to navigate a balance in their actual classroom practice. The feeling of ‘chaos’ was described by three of the four teachers interviewed when asked about what challenges they encountered when teaching students with ASD in a play-based kindergarten classroom. The idea of chaos was not used to describe the students with ASD but rather the play-based classroom as a whole when challenges emerged. These challenges that prompted a

feeling of chaos in the classroom were not initiated by having students with ASD. However, the link between chaos and students with ASD emerged when they felt that these challenges impacted their ability to engage students with ASD through play in a meaningful way. These challenges included the volume of students in the classroom and the various complex needs that students have entering kindergarten. When these challenges were present, it created an environment that felt chaotic. Rather than having ample opportunities to engage deeply with students through play, the teachers felt that they were, more often than not, managing the crowd and minimizing behavioural outbursts as they happened. Navigating a feeling of constant chaos left the teachers feeling that they had less time and opportunity to engage their students with ASD in play, build adaptations in the classroom to create connections to the play-based learning curriculum, and find ways to create an 'entry point' to learning for them. Literature on learning through play makes specific reference to the contingencies of the teacher on the product of play in the classroom (Ashiabi, 2007; Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; McInnes et al., 2013; Van Oers & Duijkers, 2013; Pyle & Bigelow, 2015). Wallerstedt and Pramling (2012) shared that while play is an intrinsically motivated action for children, it is often contingent on the experiences and opportunities that are provided in the environment. The educator in the classroom typically creates these extrinsic experiences and opportunities to create productive play and foster learning through inquiry (Wallerstedt & Pramling, 2012; Howard & McInnes, 2013; McInnes et al., 2013; Van Oers & Duijkers, 2013; Pyle, DeLuca, & Danniels, 2017). Van Oers and Duijkers (2013) emphasized the teacher's role in contributing to the creation of productive moments of play through a series of strategies (orienting, structuring and

deepening, broadening, contributing, and reflecting). Through each of these strategies, the teacher guides students and enriches play contexts to create more meaningful connections to learning (Van Oers & Duijkers, 2013). Wallerstedt and Pramling (2012) and Van Oers and Duijkers (2013) both acknowledged the importance of the role of the teacher in setting up play contexts that create a rich connection to learning and intrinsically motivated play. Knowing the importance of the role of the teacher, if they feel they are unable to set up opportunities to enrich play or broaden the scope of learning through inquiry, then it feels challenging to access the program in a meaningful way. This perceived challenge instilled a feeling of chaos, where the day was managed rather than enriched. Teacher 1 shared that their classroom was a smaller group of 22 students this year as opposed to 29 the year before. The feeling of chaos this year was minimized as fewer students contributed to better management of expectations and behaviour. They felt that the student with ASD was having a very successful experience in their classroom because they could deeply connect and build those adaptations and moments of engagement. Teacher 1 shared, “if what they’re learning is chaos, it’s not helpful,” and it creates a bigger tension for the educators to create and build meaningful moments through play when the priority becomes managing the chaos of the entire classroom. The idea of chaos and the examples shared by the teachers highlighted the possibility of tension between expectations of play-based learning, expectations of how to engage students with ASD, and the reality of actual classroom practice in kindergarten classrooms.

While chaos in the classroom was a perceived challenge that felt outside of the teachers’ control, an inward challenge that all four teachers experienced was the struggle

to meet the needs of students with ASD in a play-based classroom. Creating moments of engagement and connection were crucial to evaluating the success of students with ASD learning through play. When moments of connection fell flat, or engagement did not happen to the teachers' expectations, it created a feeling of discouragement. While the curriculum document itself is expansive, it does not account for the moments where a connection was not made, where engagement was not attained, and where a learning opportunity did not translate through play. Teacher 2 provided a valuable voice to this study through their ample experiences working in special education classrooms dedicated to students with ASD at the kindergarten level. They reaffirmed the notion that a structured environment provided better opportunities for engagement in learning for students with ASD (Hart & Whalon, 2013; Wong et al., 2013; Jung & Sainato, 2015; Nelson et al., 2017; Maich et al., 2018; Barton et al., 2019; Gilmore et al., 2019). A structured task or activity provided a clear beginning and an end as to what is expected of the student and targeted skills that the teacher wanted them to learn. There needs to be a balance between creating a meaningful classroom experience in kindergarten with play and providing moments for structured tasks for a student with ASD.

Conclusion

Play-based learning has been a mandated curriculum in Ontario for kindergarten since 2016 (Ontario Ministry of Education, 2016). The role play holds for 4- and 5-year-old students is critical for their social, emotional, and developmental progress (Ontario Ministry of Education, 2016). The curriculum offers a wealth of information, research, and guidance for creating a successful play-based classroom that utilizes inquiry and elements of child-directed learning (Ontario Ministry of Education, 2016). However, it

does not account for exceptional learners such as students with ASD. When the learning needs of some students are different from the majority, there needs to be an acknowledgement within the guidance that articulates room for modification. The play-based curriculum is viewed as a flexible and open document that allows room for modifications and accommodations, but the lack of information about what that looks like presents challenges for teachers when they need access to that information. This discussion examined three main ideas that arose from this study: (a) that engagement and connection are valued as markers of success for students with ASD in play-based learning, (b) engaging students in play-based learning that was meaningful to them involved finding what the ‘entry point’ to their learning was and, (c) allowing for adaptations and structure can help to mitigate feelings of chaos or uncontrollable challenges in the kindergarten classroom.

Engagement and Connection were two of the most prevalent themes discussed with the teachers during the interviews. The voices of the four teachers gave a perspective to how students with ASD are accessing the play-based learning curriculum and what learning through play looks like for them. Engagement in play created access points to teach academic concepts and build social interactions within the confines of play. In addition, engagement required substantial help from adults to initiate the play and sustain it as well. Connection was valued for creating meaning from play and exhibiting moments of academic or social learning. The idea of seeing a connection made between a learning expectation and play was highly valued across classrooms as a marker for success within the play-based curriculum. The similarities among all four teachers to use these two terms acknowledged that while the way the classroom is organized and

operates is unique to the teacher and their circumstances, the experience of teaching students with ASD through play was very similar.

When speaking about engagement and connection in the play-based classroom, the idea of an ‘entry point’ to learning emerged. While engagement and connection were markers for success, there needed to be an entry point first to build that. All four teachers acknowledged that using the preferred or niche interests of the students with ASD helped to build an entry point for play and learning. It was observed among all four teachers that failure to find an entry point to learning resulted in a lack of connection or engagement from the student with ASD. An entry point to learning insinuates that implicit motivation is the gateway to creating positive experiences through play for students with ASD. A play-based classroom can be a successful experience for a student with ASD when an entry point to learning is established and the connection to learning and engagement in the classroom develops.

The idea of adapting expectations for students with ASD was also prevalent across all four teachers and highlighted the need for accommodated learning at the kindergarten level. Levels of adaptation were dependent on the teacher and how they chose to implement play-based learning in their classrooms, highlighting the program’s uniqueness between classrooms. However, the notion of adaptation and recognizing that the play-based curriculum needed to be adapted to meet the needs of the students with ASD was prevalent across all teachers. With the open-endedness and flexibility of the program, teachers found that navigating challenges within the classroom could very easily lead to feelings of chaos. While the flexibility allowed room for successful moments for students with ASD, if the environment presented with too many challenges,

the feeling of chaos could overtake the classroom and hinder these feelings of success. In addition, sometimes feeling out of control or struggling to build an entry point to learning could feel discouraging for teachers when trying to meet the needs of students with ASD and typically developing peers. There is evidence that adding structure to the play-based curriculum, allotting for adaptations that could provide guidance for success, and offering information that acknowledges successful accommodations and modifications within a play-based lens could be creating a more comprehensive guide for play-based learning for kindergarten educators.

Implications of Findings

There is empirical evidence to support both play-based learning in kindergarten and structured learning for students with ASD. What lacked in the literature was the insight into how students with ASD can navigate a play-based classroom through the lens of the teacher, their planning and teaching strategies, and their personal pedagogies for play. Through the interview discussions with four teachers, rich description emerged that offered insight into this experience. What emerged from the findings were the following: (a) engagement and connection are markers of success for teachers when they plan, teach, and assess their students with ASD, (b) successfully accessing the play-based learning curriculum for students with ASD involved the teacher making adaptations both to how they perceive learning through play and how they plan their learning activities, (c) the perceptions of play teachers have primarily influenced their practice and how they organize learning, and (d) the possibility of a tension exists between the expectations set out by the play-based curriculum and the reality of actual classroom practice.

Building engagement in play activities for students with ASD was a major social and academic goal for the teachers in this study. When students with ASD engaged in play or with their peers, the teachers saw that as marker of success in play-based learning. Similarly, creating a connection to a play activity and the learning outcomes was also considered a success. The student was able to build a meaningful relationship between what the teacher planned as a learning goal and the play context that it was structured in. In this sense, engagement and connection were markers for success in accessing the play-based curriculum in kindergarten for students with ASD.

Adaptations were a crucial component to the teachers' classroom practices, as successfully accessing the play-based curriculum for students with ASD often looked different from their typically developing peers. Adaptations involved utilizing students' unique interests, finding entry points to learning to build engagement, and allowing for a difference of expectations among students regarding what is expected of them in the learning environment. In addition to adaptations being made to the way teachers plan their learning activities and implement them, the teachers also had to adapt how they perceive play in their classrooms when students show differences in how they play and learn. Teachers found that while play might look different for students with ASD, there were still opportunities to build learning moments through play when teachers adapted their expectations of what successful play is.

From the discussions with teachers about their perceptions of play and how they organize their classrooms, the notion that teacher perceptions informed their practice was evident. Teachers' experiences and knowledge about students with ASD and their experiences building engagement, connections, and adaptations were largely influenced

by the perceptions they held regarding play, play-based learning, and successfully accessing the curriculum.

Finally, in addition to positive perceptions of play, the teachers also shared various challenges that they felt impacted their program and subsequently impacted their ability to create a meaningful play-based classroom both generally and for their students with ASD. Using the word ‘chaos,’ the possibility of a tension emerged between what teachers’ felt was expected of them based on curricular mandates and the actual classroom experiences and challenges they faced. Navigating challenges and chaos contributed to a feeling of not engaging meaningfully with play-based learning and subsequently not always reaching a student with ASD through play as deeply as they wanted. Further research is needed to explore this tension and the impact the kindergarten classroom may have on the experiences of students with ASD in a play-based environment.

Based on the findings from this study, the following practical and theoretical implications emerged. The teachers in this study shared commonalities in how they approached teaching students with ASD in the play-based learning model. With the notion that engagement and connection to learning are markers for success in addition to the need for adaptations, there is a need to adapt policy to reflect and inform classroom practice. To do this, the kindergarten curriculum should be adapted to include sections that pertain specifically to supporting students with neurodevelopmental disorders (like ASD) within the play-based learning model. These sections should include: (1) how to adapt learning expectations that better reflect the play development and engagement of exceptional students (such as navigating structured aspects of learning with play), and (2)

resources and exemplars for teachers that help them to adapt their planning and assessment practices within the play-based learning model to help ensure success for their exceptional students.

In addition to policy implications, there is a need for further research in this area to add to the theoretical literature. While ASD and play-based learning are vast areas of research on their own, how students with ASD experience play-based learning through the perspective of the kindergarten teacher is not. Given the findings that emerged from this study, more research is needed to provide a clear understanding of the daily practices of educators in kindergarten when working with students with ASD.

Limitations

The Impact of Covid-19 on the Kindergarten Classroom

Due to the outbreak of the Covid-19 pandemic in March of 2020, the course of this study changed. The original intent of this study was to interview kindergarten teachers and visit their classrooms to collect observational data. The addition of observational data was meant to triangulate the data and offer a direct lens as to how kindergarten teachers were instructing, planning, and initiating play-based learning for students with ASD. With Covid-19 changing the trajectory of the 2020-2021 school year in elementary schools, classroom observations in person were no longer a viable option. While their voices and experiences offered invaluable insight into teaching students with ASD in a play-based classroom, this study could not include observations of classroom practice and experience the daily interactions that occur.

Covid-19 also impacted the kindergarten classroom as a whole during the 2020-2021 school year. The curriculum is play-based, yet the expectations in kindergarten this

past year had to adapt to periods of virtual learning and the creation of sub-cohorts. Children needed to practice social distancing, and the structure of play became dramatically different. To address this limitation the teachers were asked to reflect on both the current year teaching a student with ASD in kindergarten and to reflect on what play-based learning looked like in their classrooms prior to the changes from the pandemic. Therefore, part of this study asked educators to reflect on their practice pre-pandemic as well. The teachers also reflected on the changes that impacted their classroom from Covid-19, including a possible return to more teacher-directed learning activities so that students are not mingling in the classroom. The move to virtual learning at intermittent times during the school year also impacted the way play-based learning operated, and all four teachers felt that their classroom practice lacked in some areas of play-based learning, given the impact of the pandemic.

Recommendations for Future Research

This study offered valuable insight into the practices of kindergarten teachers teaching students with ASD in a mandated play-based curriculum. The kindergarten teachers in this study offered a wealth of knowledge as to how they approach teaching students with ASD. A broader scope of participants is recommended to determine whether the findings from this research translate across more kindergarten classrooms. There were similarities among the major themes that emerged from the teachers in this study. More research on these themes in additional classrooms might provide better insight into whether the notion of engagement, connection, and adaptation is a consistent observation.

In addition to a broader scope, classroom observations are needed to provide a breadth of the experiences of teaching students with ASD in kindergarten. Future research in this area should integrate periods of classroom observation to give context to what the teacher shares in their interviews and provide real-life examples of what students with ASD are doing in the kindergarten classroom and how they are engaging in play. In addition, classroom observations will provide a better understanding of how teachers are measuring success for their students with ASD and what tasks they are planning for the students. Further research is necessary to provide context as to how the play-based curriculum fosters a successful learning experience for students with ASD.

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Appendix A

Interview Protocol

Interview Protocol			
Interviewer:		Interviewee:	
Date:		Time:	
Place:			

<p>Objective 1: Examine how teachers are supporting the social and academic needs of students with ASD in a play-based environment.</p>	<p>Objective 2: Examine how teachers' perceptions of play influence the types of interactions they plan for students with ASD.</p>
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Interview Questions:	Field Notes:
<p>1) How many years have you taught kindergarten?</p> <p>2 What is your role now?</p> <ul style="list-style-type: none"> • Any professional development in kindergarten or related areas? • Covid circumstances 	
<p>2) What does/did “play-based learning” look like in your classroom? Can you tell me about the play interactions that are offered?</p> <ul style="list-style-type: none"> • Can you walk me through the daily schedule? • Social play and academic play? 	
<p>3) What is your perception of the role of play in learning in kindergarten?</p>	

1	<p>4) How do you plan activities and learning goals for your student(s) with ASD? Are their expectations different from other students?</p> <ul style="list-style-type: none"> • IEP's? • What percentage of activities are self-directed, adult supported, or collaborative with peers? • Do you experience any struggles or barriers when planning for students with ASD in a play-based classroom? 	
1	<p>5) How do you assess activities and learning goals for your student(s) with ASD? Does their assessment look different than their peers?</p> <ul style="list-style-type: none"> • Do you experience any struggles or barriers when assessing students with ASD in a play-based classroom? 	
2	<p>6) When your student(s) with ASD is/are engaged in play/learning activity, what does this look like?</p> <ul style="list-style-type: none"> • Self-directed? Adult supported? Engaged with peers? • Does it differ from their peers? 	
1	<p>7) Can you share an example of a time that the student with ASD was successful when engaging in social play? What about academic play?</p> <ul style="list-style-type: none"> • Can you share an example of any challenges? 	
1	<p>8) Do you think the play-based learning program supports students with ASD?</p> <ul style="list-style-type: none"> • What's working? What isn't? • Accommodations, modifications, or alternate programming goals? • Do you feel restricted or limited by the program when it comes to planning learning activities for students with ASD? 	

	<ul style="list-style-type: none">• What about when assessing students with ASD?	
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Bullet points indicate prompting questions

Appendix B

Ethics Review Approval Letter



December 7, 2020

Ms. Taylor Wormington
Master's Student
Faculty of Education
Queen's University
Duncan McArthur Hall
511 Union Street West
Kingston, ON, K7M 5R7

GREB Ref #: GEDUC-1039-20; TRAQ 6031365

Title: "GEDUC-1039-20 Examining How Teachers Support the Social and Academic Needs of Children with Autism Spectrum Disorder in Play-Based Kindergarten Classrooms"

Dear:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "**GEDUC-1039-20 Examining How Teachers Support the Social and Academic Needs of Children with Autism Spectrum Disorder in Play-Based Kindergarten Classrooms**" for ethical compliance with the Tri-Council Guidelines (TCPS 2) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405), your project has been cleared for one year.

You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at <http://www.queensu.ca/traq/signon.html>) click on "Events;" under "Create New Event" click on "General Research Ethics Board Annual Renewal/Closure Form for Cleared Studies"). Please note that when your research project is completed, you need to submit an Annual Renewal/Closure Form in Romeo/traq indicating that the project is 'completed' so that the file can be closed. This should be submitted at the time of completion; there is no need to wait until the annual renewal due date.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one-year period (access this form at <http://www.queensu.ca/traq/signon.html>) click on "Events;" under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example, you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at <http://www.queensu.ca/traq/signon.html> click on "Events;" under "Create New Event" click on "General Research Ethics Board Request for the Amendment of Approved Studies." Once submitted, these changes will automatically be sent to the Ethics Coordinator, GREB, at University Research Services for further review and clearance by GREB or the Chair, GREB.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dean A. Tripp".

Chair, General Research Ethics Board (GREB)
Professor Dean A. Tripp, PhD
Departments of Psychology, Anesthesiology & Urology Queen's University

c: Dr. Kristy Timmons, Supervisor
Dr. Saad Chahine, Chair, Unit REB
Kyle Cummings-Bentley, Dept. Admin.

Appendix C

Letter of Information and Consent

Study Title: Examining how Teachers Support the Social and Academic Needs of Children with Autism Spectrum Disorder in Play-Based Kindergarten Classrooms

Name of Principal Investigator: Taylor Wormington, Faculty of Education, Queen's University

Name of Supervisor: Dr. Kristy Timmons, Assistant Professor of Early Childhood Education, Queen's University

I am inviting Ontario certified teachers teaching in Ontario kindergarten classrooms to take part in a research study. The purpose of this study is to investigate the social and academic learning of students with autism spectrum disorder (ASD) in play-based kindergarten, and how perceptions of play can influence play activities for students with ASD. If you agree to take part, I will interview you for one hour through a virtual video conference using Microsoft Teams or a password protected Zoom call. The interview will be audio-recorded and later transcribed. There are no known risks to participating in this interview. While there is no direct benefit to participating in this study, the interviews will allow you to reflect on your practice in a professional capacity as to how you plan and instruct for students with ASD in kindergarten. The contribution of your experiences will provide importance guidance for teachers to implement functional and supportive learning experiences for students with ASD in play-based kindergarten.

Participation is voluntary. You do not have to answer any questions you do not want to. You can stop your participation at any time by telling the researcher you do not wish to continue or answer a question without impact on your employment. You may withdraw from the study up to 1 week after the interview by contacting me at t.wormington@queensu.ca or kristy.timmons@queensu.ca. You may request to have your data withdrawn from the study up until 1 week after the completion of the interview by contacting t.wormington@queensu.ca or kristy.timmons@queensu.ca.

Your confidentiality will be protected to the extent permitted by applicable laws. I will do this by replacing your name with a pseudonym in all publications and a study ID number in all study records. The study data will be stored on an encrypted hard drive on Queen's University servers. The code file that links real names with pseudonyms and study ID numbers will be stored securely and separately from the data on an encrypted USB key. Access to study data is limited to those researchers on the study team, as well as the Queen's General Research Ethics Board (GREB) may request access to study data to ensure that the researcher(s) have or are meeting their ethical obligations in conducting this research. GREB is bound by confidentiality and will not disclose any personal information. The de-identified data set will be made freely accessible in the Queen's University's Institutional Repository after a 5 year embargo period. The code file identifying your pseudonym and study ID number will be permanently erased from the encrypted USB key five years after study closure.

I plan to publish the results of this study in academic journals and present them at conferences. I will include quotes, but not personally identifying information, from the interviews when presenting my findings. I will never include any real names with quotes. I will do my best to

make sure quotes do not identify participants. During the interview, please let me know if you say anything you do not want me to quote.

If you have any ethics concerns please contact the General Research Ethics Board (GREB) at 1-844-535-2988 (Toll free in North America) or email chair.GREB@queensu.ca.

If you have any questions about the research, please contact me at t.wormington@queensu.ca or my supervisor Dr. Kristy Timmons at kristy.timmons@queensu.ca or 613-533-6000 ext. 33025.

This Letter of Information provides you with the details to help you make an informed choice. All your questions should be answered to your satisfaction before you decide whether or not to participate in this research study. Keep one copy of the Letter of Information for your records and return one copy to the Researcher, Taylor Wormington.

You have not waived any legal rights by consenting to participate in this study.

By signing below, I am verifying that: I have read the Letter of Information and all of my questions have been answered.

- Yes, you have my permission to use quotes/audio record/video record
- No, you do not have my permission to use quotes/audio record/video record

Signature of Participant PRINTED NAME Date
(Teacher)

Signature of Person Conducting PRINTED NAME & ROLE Date
the Consent Discussion

Appendix D

Verbal Consent Script

- ✓ **Hello, my name is Taylor Wormington from the Faculty of Education at Queen’s University.** I am working under the supervision of Dr. Kristy Timmons, Assistant Professor of Early Childhood Education in the Faculty of Education at Queen’s University.
- ✓ **I am inviting you take part in a research study titled, Examining How Teachers Support the Social and Academic Needs of Children with Autism Spectrum Disorder in Play-Based Kindergarten Classrooms.** I am interested in talking to Ontario Kindergarten teachers teaching in the play-based kindergarten program.
- ✓ **The purpose of this study is to investigate how teachers are responding to the social and academic learning needs of students with Autism Spectrum Disorder in a play-based classroom.**
- ✓ **If you agree to take part, I will interview you for approximately one hour using Zoom or Microsoft Teams.**
- ✓ **The interview will be recorded using Zoom or Microsoft Teams and will be later transcribed verbatim. Quotes from the transcription may be used in the final paper.**
- ✓ **There are no known risks to participating in this study.**
- ✓ **We will be collecting demographic information such as your years of teaching experience and contact information.**
- ✓ **While there are no direct benefits to the study, the interviews will allow you to reflect on your practice in a professional capacity as to how you plan and instruct for students with ASD in kindergarten.**
- ✓ **You will not be paid for taking part in this study.**
- ✓ **Participation is voluntary. You don’t have to answer any questions you don’t want to. You can stop participating at any time without penalty.**
- ✓ **You may withdraw from the study up to one week after participation in the interview by contacting me at t.wormington@queensu.ca**
- ✓ **You may request to have your data withdrawn from the study up until one week after participation in the interview. At this point, all data will be de-identified and the data will no longer be able to be withdrawn.**
- ✓ **Your confidentiality will be protected, to the extent permitted by applicable laws.**

- ✓ I will protect your confidentiality by replacing your name with a pseudonym in all publications and a study ID number in all study records. The study data will be stored on an encrypted hard drive on Queen's University servers. The code file that links real names with pseudonyms and study ID numbers will be stored securely and separately from the data on an encrypted USB key.
- ✓ I will keep your data securely for at least five years per Queen's University Policy. The de-identified data set will be made freely accessible in the Queen's University's Institutional Repository after a 5 year embargo period. The code file identifying your pseudonym and study ID number will be permanently erased from the encrypted USB key five years after study closure.
- ✓ Access to study data is limited to those researchers on the study team, which includes myself (the principle investigator) and my supervisor Dr. Kristy Timmons. As well, the Queen's General Research Ethics Board (GREB) may request access to study data to ensure that the researcher(s) have or are meeting their ethical obligations in conducting this research. GREB is bound by confidentiality and will not disclose any personal information.
- ✓ I plan to publish the results of this study in academic journals and present them at conferences. I will include quotes, but not personally identifying information, from the interviews when presenting my findings. I will never include any real names with quotes. I will do my best to make sure quotes do not identify participants. During the interview, please let me know if you say anything you do not want me to quote.
- ✓ If you have any questions about the research, please contact me at t.wormington@queensu.ca or my supervisor Dr. Kristy Timmons at kristy.timmons@queensu.ca or 613-533-6000 ext. 33025.
- ✓ If you have any ethics concerns please contact the General Research Ethics Board (GREB) at 1-844-535-2988 (Toll free in North America) or email chair.GREB@queensu.ca.
- ✓ This verbal consent process and Letter of Information (LOI) provides you with the details to help you make an informed choice. All your questions should be answered to your satisfaction before you decide whether or not to participate in this research study. Please keep a copy of this LOI for your records.
- ✓ I will be documenting your verbal consent in our research records.
- ✓ You have not waived any legal rights by consenting to participate in this study.
- ✓ I confirm the participant has verbally consented to the following:
 - I have explained all aspects of this study to the participant as outlined in the LOI.
 - I have answered all of the participant's questions to their satisfaction and the participant had sufficient time to consider their participation in this study.

- The participant was informed that they may choose to stop their participation at any time for any reason without penalty.
- The participant was informed that their legal rights would not be affected by consenting to participate in this study.
- The participant was provided with a copy of the Letter of Information for their records.
- The participant consented to the use of Audio-Video Recording and Use of Quotes.
- The participant verbally agreed to participate in this study and to follow the study procedures.

Participant Study ID

**Signature of Person Obtaining
Consent Obtained**

Printed Name

Date of Verbal