Promoting Early Literacy Through Play-based Learning: Supporting the Foundations of Early Literacy Through Child-Directed Play

Master's Thesis

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Abstract

Learning literacy in the pre-school years is dominated by play-based practices, but as children enter the formal school system literacy instruction takes a more systematic and explicit form. There is a significant body of literature that acknowledges the numerous benefits of child-directed play that outweigh teacher-directed instruction, but despite the proven evidence of the benefits of play, there remains a tendency towards explicit teacher-directed instruction in the early years. Moreover, play is often regarded as spontaneous, chaotic, and an environment where learning is accidental and unplanned. This research study will investigate how intentional, purposeful literacy learning through child-directed play can support the foundations of early literacy. The research uses secondary qualitative data analysis guided by a constructivist approach to investigate the following research questions: 1. How can intentional, purposeful literacy learning through play support the foundations of early literacy? 2. How does the educators' role influence the intentionality and purposefulness of play? The investigation involved reflexive thematic analysis of data, that consisted of images and discussions. Key findings highlight the foundational literacy building blocks that occur in a play-based environment, as well as underscore intentional practices of educators in the pre-primary program. Thus, drawing attention to the use of intentional purposeful play to promote the foundations of literacy which can have far reaching impact on literacy learning practices.

Keywords: Early literacy skills, play-based learning, child-directed play

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Chapter 1: Introduction

Rationale

Play is the preferential means of learning in early childhood education (Gronlund & Rendon, 2017; Parker et al., 2022). The literature provides supported evidence that demonstrates the benefits of child-directed play compared to teacher-directed instruction (Pyle & Danniels, 2017; Wood, 2009). Despite the proven evidence of the benefits of play, it is often regarded as spontaneous, chaotic, and/or an environment where learning is accidental and unplanned (Gronlund & Rendon, 2017; Miller & Almon 2009; Pyle & Danniels, 2017). Consequently, there remains a tendency towards explicit teacher directed instruction (Miller & Almon, 2009; Pyle and Daniels, 2017), particularly when specific learning outcomes are expected (Wallerstedt & Pramling, 2012).

This connection between teacher-directed instruction and learning outcomes is visible in the Nova Scotia education system. The Pre-primary Program in Nova Scotia encourages the use of child-directed play to support learning (Nova Scotia Department of Education and Early Childhood Development, 2018), but following the entry into the traditional school system (i.e., Grade Primary) and with the introduction of learning outcomes; children experience a radical transformation in pedagogical practices from child-directed to explicit teacher-directed instruction (Nova Scotia Department of Education and Early Childhood Development, 2019). This reflects the inconsistencies that may result in some educational systems due to the rise of standards and mandating of specific learning outcomes.

Defining Early Childhood

Early childhood is a developmental stage that constitutes the first few years of one's life, defined by UNESCO as the period from birth to eight years of age (UNESCO, 2022); early

childhood settings include childcare, nursery, pre-primary, primary and early elementary. According to UNICEF (2023), “Early childhood offers a critical window of opportunity to shape the trajectory of a child’s holistic development and build a foundation for their future.” The early childhood years are a critical phase of development that comprises complex progressive changes in foundational skills that need to be stimulated and nurtured for a child to reach their full potential. This phase is critical as it depicts the academic performance of children throughout their school years and beyond, which is why greater attention has been given to education in the early years. While reading and writing skills develop throughout a child’s life span, the period from birth to eight years is the most significant period for literacy development (Saracho, 2017).

Early Literacy Practices

Literacy is the oral and written ability to communicate in a language (Blamey & Beauchat, 2016; Lonigan & Shanahan, 2010; McCabe, 2013;). Early literacy refers to the skills and abilities that children develop from birth until they begin formal reading and writing instruction. Those skills form the foundation for literacy and predict later reading and writing success.

Early literacy practices have become an essential component of effective teaching. Literacy practices begin in the preschool years (Blamey & Beauchat, 2016; McCabe, 2013) where children are given the opportunity to develop foundations of literacy such as oral language, phonological awareness, and vocabulary (McCabe, 2013). They involve numerous activities and strategies that promote and support young children’s reading and writing skills and aim for building the foundation of literacy development and enabling children to become successful readers and writers later on in their lives.

Under several objectives, one of which is school readiness, early years curricula around the world now prioritize the introduction of language and literacy skills (Bertram & Pascal, 2016). Common early literacy practices include multimodal communication that draw on all senses. They involve visual communication, spoken language, gestures, body language and sound (Daniels, 2021; Olaussen, 2022). Early literacy practices also commonly involve exposure to a variety of texts and symbolic representation (Nova Scotia Department of Education and Early Childhood Development, 2018).

Literacy learning in the pre-school years is dominated by play-based practices (Walsh et al., 2019). In many countries play-based learning has become the mandated pedagogy in early years curricula (McInnes, 2019; Pyle et al., 2017). Play has been associated with learning in the pre-school years to the extent that some see play and learning as inseparable in this stage (Samuelsson & Johansson, 2004). Early literacy and play are integrated in a variety of ways. In a play context literacy is promoted by surrounding children with a literacy-rich environment that incorporates multiple modes of communication such as music, movement, storytelling, visual arts, digital media, and text (Nova Scotia Department of Education and Early Childhood Development, 2018). In such environment, children draw on all their senses to engage in early literacy activity (Daniels, 2021). Early literacy can also be integrated with play in ways such as, storytelling, dramatic play, and outdoor play (Pyle et al., 2017).

As children enter the formal school system, literacy practices begin to take a different form as play and learning separate (Rand & Morrow, 2021; Wallerstedt & Pramling, 2012). As curricula become mandated with standards and specific learning objectives, literacy instruction takes a more systematic and explicit form (Almon & Miller, 2009; Nova Scotia Department of Education and Early Childhood Development, 2023; Pyle & Daniels, 2017). Although

classrooms may remain playful, instruction becomes highly structured and teacher-directed, with diminishing child-initiated play (Almon & Miller, 2009). Literacy practices in school include a larger exposure to a variety of texts, writing and producing print, and discussing and answering questions about stories and texts (Nova Scotia Department of Education and Early Childhood Development, 2023).

Foundations of Literacy: The Pillars of Reading and Writing Success

The foundation of literacy refers to the basic skills and knowledge necessary to read and write proficiently that are typically introduced in early childhood (Blamey & Beauchat, 2016; Lonigan & Shanahan, 2010; McCabe, 2013;). The Nova Scotia Department of Education has identified six essential basic skills that contribute to successful beginning reading (Nova Scotia Department of Education and Early Childhood Development, 2023). Those pillars align with those identified in the literature and which include oral language, phonological awareness, Phonics, vocabulary, comprehension and reading fluency (NICHD, 2000; The Ontario Human Rights Commission, 2022; Treiman, 2000). While those six pillars are focused on reading, my study involves the investigation of the broader concept of literacy, consequently writing is included as a 7th foundational pillar in my thesis. The rationale for including writing as a foundational skill in this investigation is further explained in the literature review chapter. Therefore, the seven pillars of literacy are as follows:

1. *Oral Language*: is spoken language and is a form of language production (Liberman, 1999; Nova Scotia Department of Education and Early Childhood Development, 2023).
2. *Phonological Awareness*: is a broad oral skill that includes sensitivity to sound structure hearing and manipulating units of oral language such as individual sounds of a word

(phoneme), rhyme, syllable, onset-rime (Nova Scotia Department of Education and Early Childhood Development, 2023; Treiman, 2000).

3. *Phonics*: letter-sounds correspondence (Nova Scotia Department of Education and Early Childhood Development, 2023; Treiman et al.,1998).
4. *Vocabulary*: includes knowledge of word meanings and the context for using these words (Biemiller & Boote, 2006; Nova Scotia Department of Education and Early Childhood Development, 2023).
5. *Reading Fluency*: is a characteristic of skilled reading that involves the application of alphabetic knowledge in decoding words with speed and accuracy (Seidenberg et al., 2020; NICHD, 2000; Nova Scotia Department of Education and Early Childhood Development, 2023)
6. *Comprehension*: is making meaning from text through the integration of information across sentences and ideas in a text. (Cain et al., 2004; Nova Scotia Department of Education and Early Childhood Development, 2023).
7. *Writing:* A foundational literacy skill that involves a number of skills that include the physical act of writing and producing marks and giving meanings to these marks. Additionally, writing requires knowledge of the conventions of print (e.g., left-to-right, top-to-bottom), alphabetic knowledge, and the ability to detect and manipulate sounds (Cabell et. al., 2013; Pavelko et. al., 2018).

Purpose of the Research Study

As previously mentioned, play is often conceptualized by education practitioners and non-practitioners as spontaneous, unplanned, or chaotic activity that cannot be used to support specific learning outcomes (Gronlund & Rendon, 2017; Miller & Almon 2009; Pyle & Danniels,

2017). With this in mind, this study aims at exploring how child-directed play supports the foundations of literacy by investigating practices in the Nova Scotia Pre-primary Program. The Pre-primary Program was chosen for being guided by a play-based curriculum, and not mandated by specific learning outcomes. Educators'[1] early literacy experiences were analyzed with the aim of identifying and documenting the literacy building blocks that occur in pre-primary through child-directed play and lay a foundation for primary and beyond. The study used *The Six Pillars of Effective Reading Instruction* (Nova Scotia Department of Education and Early Childhood Development, 2023) as a framework to guide the analysis process. Furthermore, to address the intentionality and purposefulness of play, the study investigated the educator's role and analyzed educators' experiences for signs and means of intentionality. Consequently, the research study investigated two main questions:

1. How can intentional, purposeful[2] literacy learning through play support the foundation of early literacy?
2. How does the educators' role influence the intentionality and purposefulness of play?

[1] The term *educator* is used throughout this paper rather than the term *teacher,* except for generalized terms such as *teacher directed*. This is due to its preference in early childhood programs especially the Pre-primary Program. Additionally, the term 'educator' gives a deeper meaning to the role adults play in early childhood settings, where adults are not mere instructors and providers of knowledge, but mentors, guiders, and facilitators.

[2] The term purposeful play refers to play that is meaningful and enjoyable to children and at the same time supports developmentally appropriate learning objectives.

Chapter 2: Literature Review

Why Play?

Due to its fundamentality to child development and wellbeing, play has been acknowledged as a child's right until the age of 18 by the United Nations, Article 31 in the Convention on the Rights of the Child (United Nations, 1989, p.9). Although to date scholars and researchers possess varying conceptualizations of play, they agree on the importance of play-based learning in the early years (Gronlund & Rendon, 2017; Lillard et al., 2013; Parker et al., 2022). The literature supports the fundamental benefits of play in the early years providing strong evidence that play is essential for all areas of child development (Baker, 2015; Galbraith, 2022). Numerous empirical studies conducted on the benefits of play provide strong evidence that play acts as a vehicle for developing a range of skills and abilities that include physical, cognitive, linguistic, emotional, social, and spiritual skills (Dickey et. al, 2016; Sheridan et. al, 1999).

Moreover, several theorists have spoken to the powers of play and its significance to child development. John Dewey refers to numerous benefits of play, mainly highlighting the growth among social and communication skills (Dewey, 2012). Vygotsky considered play as central to child development and key to cognitive and social development (Kingdom, 2020). Vygotsky also spoke to the role of play in mental development, specifically referring to pretend play as "the highest level of preschool development" (p.1044). Vygotsky claimed that pretend or role play creates a zone of proximal development that he defined as "a higher level of performance achieved under adult guidance or in collaboration with more capable peers" (Smolucha, L. & Smolucha, F., 2021, p.1044). Gray (as cited in Mehta et. al, 2020) refers to the

sociability aspects of play stating that curiosity, playfulness and sociability are the ways that children educate themselves when given the freedom to do so.

With the rise in academic standards and the diminishing of child-directed play, several researchers flagged their concerns over the decrease in children's play (Dickey et. al, 2016; Gray, 2011; Miller & Almon, 2009). In their book 'Crisis in the Kindergarten', Miller and Almon (2009) speak of how academic instruction has replaced play in early childhood and how that has led to what they described as a "looming catastrophe" (p.72). They also bring forward a strong argument that placing kindergarten or primary children under the pressure of meeting inappropriate expectations inflicted by academic standards evokes negative feelings that proliferates itself in the form of behavior problems. Similarly, Gray (2011) voices his concerns with diminishing play opportunities associating the decline in play with the decline in children's mental health and the rise of mental health issues such as anxiety and depression. In this context, psycho-dynamic thinkers such as Freud, Erikson and Winnicott have linked play and emotions, arguing that play is a means for children to express their feelings, resolving conflicts, and overcoming challenges (Sheridan et. al, 2009). Thus, the psycho-dynamic theory raises the concern that behavioral issues encountered in schools may be the result of decreased child-directed play.

Play not only fulfills all the aspects of development but is also a measure of a child's psychological and physical wellbeing and is essential for reaching their maximum potential (Dickey, 2016). Although play may be considered leisure by some, historically prominent scholars like John Dewey (2012) consider play as work. Similarly, Vivian Paley (2009) described play as:

> A complex occupation, requiring practice in dialogue, exposition, detailed imagery, social engineering, literary allusion, and abstract thinking. Being both work and love for young children, play is absolutely essential for their health and welfare. (p.170).

Defining Play

There has been significant dispute on how play is to be defined with broad variations in what is referred to as play. Many of the activities that adults call play may in-fact be teacher-directed and may not be engaging or pleasurable to children (Miller & Almon, 2009). Since play is multi-faceted in nature it was crucial for the purposes of this research study to have a concrete definition of play and to identify what practices fall under play-based learning.

The literature reveals numerous attempts to define play, but the nature of play made it difficult for scholars to define in one single definition. Alternatively, scholars resorted to identifying elements or characteristics of play (Gronlund & Rendon, 2017; Fesseha & Pyle, 2016). According to Gray (2013), "Play is not neatly defined in terms of any single characteristic, instead it involves a constellation of characteristics" (p.140). Attempts to define the attributes of play include "The Five Characteristics of Learning Through Play" developed by the LEGO Foundation (Parker et al., 2022), "The Indicators of Playful Learning" (Mardell et al., 2019) and "A Continuum of Play-Based Learning" (Pyle & Danniels, 2017). Among the many attributes of play identified in the literature, play was most commonly characterized as self-directed, voluntary, engaging, pleasurable or fun (Eberle, 2014; Fesseha & Pyle, 2016; Grey, 2013; Pyle & Daniels 2017).

Gronlund and Rendon (2017) sum up the attributes of play into two major properties that they believe encompass the characteristics of play: "child-directed and open-ended" (p.21). Child-directed learning through play ought to be spontaneous, fun, and voluntary. On the other

hand, an open-ended quality of play supports improvisation, creativity, and freedom of time (Gronlund & Rendon, 2017). In accordance with the previous findings in the literature, for this research play is defined as an activity that is voluntary, child-directed, engaging, pleasurable or fun.

Play and Early Literacy

In addition to the developmental benefits of play (Fernyhough; Saracho, 2021), studies have provided strong evidence that play supports more advanced skills such as literacy and numeracy (Carolan et al., 2021; Pyle et. Al, 2020; Van Oers & Duijkers, 2012). Van Oers and Duijkers (2012) argue that play is a valuable context for both learning and teaching where important educational skills such as language can be promoted. Play provides valuable opportunities for all the components of literacy, including the practice of fine motor skills that are essential for writing (Smith & Pellegrini, 2013), vocabulary (Dickinson et. Al, 2019; Van Oers & Duijkers, 2013), phonics (Campbell, 2020), and comprehension (Rand & Morrow, 2021).

The link between play and literacy was first noticed in the 1980s when researchers began linking language acquisition to cognitive and social development (Rand & Morrow, 2021; Hoff, 2006). Piagetian and Vygotskian theories proposed that reading is not merely decoding, but it involves cognitive, linguistics, meaning-making, and social processes. This proposes that in the early childhood period, children require observation and engagement in conversations as well as experiencing meaningful interactive relationships with one another (Hoff, 2006). According to Vygotsky's theory, the powers of play in promoting literacy lies in play being the natural context for young children to learn through social interaction (L.Smolucha & F. Smolucha, 2021). Therefore, it is no surprise that socio-dramatic play or pretend play has been particularly associated with literacy development where children engage in imaginative use of language and

symbolic representations. During pretend play children practice advanced language and communication skills (Weisberg et al., 2013) and participate in complex literacy practices (Thomas & Jones, 2021). Similarly, Vivian Paley has given exceptional attention to storytelling and dramatization both in her books as well as her teaching practices, advocating that make-believe not only develops a child's imagination and social abilities but also sets the foundational skills for reading and writing (as cited in Cooper, 2005; Paley, 2021). Additionally, play allows children to engage with literacy in constructive ways where play permits the exploration of multi-modal literacies through words, pictures, objects, and movement (Thomas & Jones, 2021).

With regard to vocabulary, there is significant supporting evidence particularly revealing positive effects when instruction is embedded in play (Toub et. Al, 2017). Moreover, an empirical study conducted on teaching vocabulary revealed that in a play-based curriculum where children practiced the target vocabulary words in a rich context, they acquired more theme-related words with richer semantic content than in a teacher-directed curriculum (Van Oers & Duijkers, 2013).

The early years are considered a critical point in a child's life where the literacy skills acquired are predictive of their reading abilities throughout the school years and possibly beyond (Cunningham & Stanovich, 1997). The literature undeniably advocates for the use of play in supporting early literacy, presenting strong evidence that pairing play with literacy instruction, yields greater gains in acquiring the foundations of literacy.

The Intentionality of Play

Play is sometimes deemed as a spontaneous, chaotic, or unplanned activity, and sometimes viewed as a child-directed practice that is separate from learning; whereas learning is viewed as planned, deliberate, and resulting from teacher-directed practices (Pyle & Danniels,

2017; Gronlund & Rendon, 2017). Consequently, when specific learning outcomes are anticipated, play can be replaced with explicit instruction.

The literature presents a strong argument that play needs to be intentional in order to support literacy learning. Pyle et al (2017) argue that play that is not guided by adult intervention may be insufficient to meet learning goals. This argument has also been brought up earlier when Dewey (2012) suggested that in a school context it is not enough to introduce play and games, but play should rather be guided and targeted by the educator. In the same context, Dickinson et al. (2019) argue that unintentional play is not sufficient for learning specific target vocabulary, and that guided play that involves gentle adult mentorship is necessary to achieve specific learning goals.

Previously, play may have been viewed as a child's only activity that should be preserved from adult interference (Samuelsson & Johansson, 2006), but contemporary conceptualizations acknowledge play and learning as inseparable (Van Oers & Duijkers, 2012) and view adult involvement as an opportunity to enhance a child's learning, as long as involvement doesn't negate the attributes of play (voluntary, child-directed, engaging, pleasurable or fun).

In a school setting, play may be focused by rules to achieve specific goals where adult intervention guides play rendering it purposeful and deliberate without stripping it from its main characteristics (Eberle, 2014). The next section reviews the discourse around the teacher's role in guiding play and the degree of involvement.

Educator's Role

With respect to adult involvement and the educator's role in a play-based setting, there seems to be controversial views. Some believe that play is a child's work that should be free from adult involvement, while others view adult involvement as desired and essential, and some

lie somewhat in between. Although the benefits of play are numerous, Pyle and Danniels (2017) suggest that these benefits may be dependent on the type of play and the role of the educator in play contexts. Educator involvement may be a requisite of academic instruction, but it is essential in the enactment of play-based pedagogy (Pyle & Bigelow, 2014) and known to be a part of best practices in preschool and kindergarten classrooms (Gronlund & Rendon, 2017). Overall, the literature acknowledges the involvement of educators in play-based learning, but the degree of involvement seems to be controversial and has stirred various viewpoints (Gronlund, & Rendon, 2017; Samuelsson & Johansson, 2006).

A majority view learning through play as child motivated and child-directed, where the educator's role is to provide an environment that is nurturing, engaging, and rich by providing adequate time, space, and tools for healthy child development and learning (Dickey et. al, 2016; Dickinson et al., 2019; Gray, 2013). Such an environment encourages engagement in learning, while play remains voluntary and child directed (Gronlund & Rendon, 2017). The educator is portrayed by some as a guide and as a facilitator who adjusts the learning environment and ensures its flexibility to better suit children's choices and interests. Within this role, the educator maximizes the learning experience but does not impose or oblige certain activities. Studies suggest that when educators are involved by providing direct support and guidance by constructing play environments, play can contribute to the development of academic skills (Weisberg et al., 2013).

Overall, the literature suggests that intentional and responsive involvement is essential for quality learning outcomes. Educator's involvement is desirable provided it does not strip play from its authentic qualities, such as freedom of choice, attraction and continuation desire, and improvisation (Gronlund & Rendon, 2017).

Literacy Learning

From the beginning of formal schooling, different methods have been devised to teach reading. In the early 1900s, it was believed that children should not be exposed to print material until they showed readiness (Teale & Sulzby,1986). This belief was criticized and questioned as some children failed to read (Flesch,1955, 1988, as cited in Saracho, 2017; Morphett & Washburne, 1931). Studies conducted before first grade in the 1960s marked a shift in early literacy practices, as they revealed that children start reading well before first grade (Gunderson, 1964; O'Connor, 2011; Saracho, 2017). After that, the role of schools in the early years began to shift from merely assessing for reading readiness to focusing on auditory and visual discrimination, letter names and sounds, and word recognition using direct instruction (Rand & Morrow, 2021). With the growing evidence that literacy is a product of interconnected skills that form in the pre-school years (Biemiller, 2006; Rand & Morrow, 2021), focus on pre-reading skills began to increase in pre-school and kindergarten, until it became an acceptable practice in the 1990s.

The Foundation of Literacy

In an attempt to improve literacy instruction, educational practitioners and policy makers identified essential pillars as the foundation of literacy that led to highest probability of reading and writing success. Essentially some institutes identified five pillars or key components to reading, such as the National Institute for Literacy (2006) and The National Reading Panel (2000) in The United States. In the year 2000 the United States National Reading Panel issued an evidence-based report that identified five pillars for effective reading instruction: phonemic awareness, phonics, fluency, vocabulary, and comprehension (NICHD, 2000). The report was later criticized by several critics for neglecting oral language as a pillar of successful reading (Lonigan & Shanahan, 2010). The Ontario Human Rights Commission (2022) published an

executive summary of conducted public research in 2019. The research study was the first of its kind in Canada, where a combination of research and expertise in reading science revealed that word-reading skills, oral language development, vocabulary and knowledge development, and writing are all important components of literacy. Additionally, in 2022, The Nova Scotia Department of Education and Early Childhood Development (2023) has published *The Six Pillars of Effective Reading Instruction* as a resource for educators to guide literacy instruction from grades primary to two. This document sums up the components of reading instruction into six essential pillars which are oral language, phonologic awareness, phonics, vocabulary, reading fluency and comprehension.

For this study a review of the literature has been conducted to identify the pillars or foundations of literacy. The literature suggested seven foundations of literacy instruction that have proven to correlate to acquisition of literacy skills. Those components are highly inter-dependent and together lead to the ultimate goal of fluency in identifying and understanding text (Seidenberg et al.,2020; Vellutino et al., 2007). The foundations of literacy are formed in the early years of childhood (Roberts, 2011; Seidenberg et al.,2020) and being highly inter-dependent require equal attention.

Among those essential foundations of literacy that form in the pre-school years are alphabetic knowledge, phonological awareness, and oral language. (Roberts, 2011; Scarborough, 2001; Seymour et al.,2003). Literature gives particular attention to alphabetic knowledge and phonological awareness as they are the first requisites for reading and also the best predictors for early reading ability (O'Connor, 2011; Roberts, 2011; Vellutino et al., 2007). According to Treiman et al. (1998) the most important foundation of literacy is letter and sound correspondence, or what is also referred to as the alphabetic principle. Treiman et al. (1998)

argue that children need to know how sounds correspond to letters to decode and construct words. Children who master the alphabetic principle can decipher new and unknown printed words in addition to spelling readable words (Treiman, 2000).

Phonological awareness is an oral language skill described by Roberts (2011) as the anchor connecting speech with print. Phonological awareness or sensitivity to sound structure, is the ability to analyze spoken words into phonemes (smallest units of word structure) for example, substituting one phoneme for another or segmenting the phonemes within a word. (Treiman, 2000; Treiman et al., 1998).

Another foundational literacy skill that has been proven to have a strong correlation with literacy achievement is oral language (Snow et al., 1998). Oral language is a form of language production that consolidates language learning. Children learn new words by storing their pronunciation and meaning in their memory. Speech movement during oral language production helps children refine the individual phonemes of the language they are speaking (Liberman, 1999) thus improving pronunciation. Oral language has also been positively correlated with vocabulary (Roberts, 2011) and comprehension skills (Lonigan & Shanahan, 2010).

Since the ultimate goal of reading is to facilitate proficient reading comprehension, the foundations of literacy do not stop at decoding and alphabet knowledge, but also incorporate fluency, vocabulary, and reading comprehension (Hudson et al., 2021). As children learn to decode or read words fluently, they also need to build vocabulary. Recent research presents word identification and vocabulary as two different groups of variables that affect reading acquisition. This implies that equal attention needs to be given to both in the pre-school years to achieve better reading acquisition skills later in the elementary stages (Biemiller & Boote, 2006). Studies

show that children with low vocabulary face challenges in elementary, especially with reading comprehension, opposing to those with developed vocabulary (Seidenberg et al., 2020).

Reading comprehension is considered an advanced reading skill that becomes fully operative after the reader has mastered word identification and acquired sufficient vocabulary to comprehend written language (Cain &Oakhill, 2004; Vellutino et al., 2007). Comprehension skills involve the integration of information across sentences and ideas in a text, such as making inferences. Thus, comprehension is an important skill that allows the reader to construct an integrated and coherent meaning of text (Cain et al., 2004).

After being identified by the United States National Reading Panel as one of the five critical components of reading, fluency began receiving considerable attention from researchers and education practitioners (Pikulski & Chard, 2005). According to Seidenberg et al. (2020), “Fluency is a characteristic of skilled reading” (p.123) and defined by Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD, 2000) as "the ability to read text quickly, accurately, and with proper expression" (p. 3). Although children may start reading before school, they require intensive literacy instruction in order to develop a degree of fluency (Treiman, 2000). Harris & Hodges (1995, as cited in Pikulski & Chard, 2005) defined fluency as "freedom from word identification problems that might hinder comprehension” (p.85). Therefore, fluency depends on two of the previously mentioned foundations which are decoding and comprehension. Fluency is important as it is essential for high levels of reading achievement. According to Stanovich (1986) the highest the degree of fluency that a reader achieves the more likely they will read extensively. This is due to the fact that reading is a tedious task for non-fluent readers.

Finally, writing comes as an emergent literacy skill that develops inter-relationally with other literacy skills (Cabell et. al., 2013) and is therefore an important predictor of reading success (NELP, 2008). The importance of early writing as a foundational literacy skill lies in its consistence of the precursors of reading and how it covers knowledge of numerous skills relevant to both print and sound (Cabell et. al., 2013; Pavelko et. al., 2018). In addition to fine motor skills, writing draws on several emergent literacy skills such as print awareness, alphabetic knowledge and phonological awareness, each of which in turn encompasses a number of skills (Cabell et. al.,2013; Pavelko et. al., 2018; Puranik & Lonigan, 2009). As young children encounter their first attempts at writing, they begin scribbling to convey meaning (Puranik & Lonigan, 2009). Those scribbles are not random but are an early demosntration of symbolic representation (Tolchinsky, 2003). Letter and name writing are also early encounters of writing, where children practice alphabetic knowledge and print awareness. Even though at first children produce letters without the understanding that those letters resemble sounds, as children gain alphabetic knowledge and engage in meaningful opportunities to produce text by drawing or writing, they develop early writing skills, and children eventually associate letter and word writing with sounds and spoken language (Cabell et. al., 2013).

In conclusion, the identified foundations of literacy from the literature have a complex relationship. Literacy skills are progressive and inter-related at the same time, where some skills must be achieved prior to others. For example, decoding must be mastered before comprehension of written text becomes possible. On the other hand, some skills are inter-related, such as the correlation between vocabulary and comprehension, where vocabulary enhances comprehension, and comprehension in turn adds to vocabulary acquisition (Biemiller & Boote, 2006). In the pre-

school years it is essential that the basic literacy skills be equally emphasized, and educators ideally should focus on oral skills in addition to print related skills.

Conclusion

The literature review suggested seven components of literacy that were often mentioned as essential for successful reading and writing instruction, thus considered as foundations or pillars of literacy. The foundations or building blocks of literacy form in the pre-school years and depict the reading progress of children throughout the span of their lives. When pre-literacy skills are introduced earlier on in a child's life, there is a greater chance that they show more reading progress as they begin formal schooling. Additionally, play being the natural incumbent of childhood not only fulfills the psychological and developmental needs of this phase but has also proven to be the best means for learning in early childhood. Play acts as a vehicle for language development where children have the opportunity to practice and refine foundational literacy skills. Even though play is spontaneous in nature it can be utilized for purposeful and intentional instruction to promote specific learning outcomes. This entails the reconceptualization of the educator's role, from merely delivering instruction to acting as a direct guide and support and carefully planning the learning environment and materials.

Chapter 3: Research Methodology

Research Paradigm

The research study connects with constructivism as a perspective that believes that absolute truth does not exist. Rather, this approach believes in multiple realities, where those realities are constructed by individual experiences that are equally valid (Schram, 2003). Additionally, a constructivist epistemology is committed to participants' viewpoints, where a phenomenon is explored through individual perceptions and interpretations (Leedy & Ormrod, 2016) and conducted with minimum disruption to the natural context (Streubert Speziale & Carpenter, 2007).

Being focused on people, qualitative research in general acknowledges and values subjectivity, as well as acknowledges the biases brought by the researcher (Leedy & Ormrod, 2016). In qualitative inquiry researchers often encounter situations where they need to draw on their own values, believes, intuition and professional standards, thus making outcomes highly influenced by the researcher's background, interest, and position. Therefore, in the following section I describe my positionality within this research project.

Researcher's Positionality

What brought me to this research study is a long story that began early on in my childhood years. As a fearful and anxious child, the first years of school were immensely stressful. As someone who had experienced alienation in her early years of schooling, I highly valued friendly and inclusive environments. As I became an early childhood educator, a lot of those preceding feelings from childhood shaped and dictated my relationship with my own students. My primary concern was to create a comfortable, nurturing, and welcoming environment for children encountering their first years of school. As I moved up in my career from educating to curriculum

design, I attempted to create meaningful learning experiences, making sure young children got the amount of play, growth, and joy they needed.

Another aspect that has significantly shaped my world views was the diversity I encountered as a child and as an early childhood practitioner. As a young child I moved from my home country Egypt to the Gulf, where I grew in a very diverse environment, then moving back to my home country as a young adult and practicing education in multiple international systems. Coming across different paradigms and approaches has taught me that realities may differ from one context to another, and that there is no one rigid truth.

Now, as a recent immigrant to Nova Scotia, Canada I carry my quest forward by embarking on this research journey. During this research study, I believe my experiences as a child, and as an educator has shaped who I am as a researcher. The precision and keenness of being an educator, my diverse encounters of people and settings, and the lingering memories of childhood has certainly influenced how I analyzed and interpreted data.

Methods

The method deployed in this research study was secondary qualitative analysis. The data used in this study was previously collected by the Early Childhood Collaborative Research Centre for the project ‘Supporting Numeracy and Literacy in Play-based Early Learning Programs, led by Dr. Jessie-Lee McIsaac and Dr. Christine McLean, which was conducted to examine how numeracy and literacy are operationalized in the Pre-primary Program (Early Childhood Collaborative Research Centre, 2023). The study followed a qualitative collaborative design where pre-primary early childhood educators participated in an inquiry-oriented professional learning community that included a series of professional development workshops

to enable meaningful dialogue about their own perceptions of play-based pedagogy and its enactment in their classrooms.

Data Collection

Data collection for the larger research Project 'Supporting Numeracy and Literacy in Play-based Early Learning Programs' took place across a series of 18 workshops in total, 6 workshops for each of the community groups. The workshops consisted of three information sharing sessions, followed by two photo sharing sessions and one final group brainstorm. Acknowledging early childhood educators' extensive knowledge, all sessions were collaborative, based on conversation and reflection, where each group shared their personal experiences and examples of numeracy and literacy in their play-based classrooms. Additionally, educators collaborated on producing a final visual representing the themes discussed throughout the workshops (McIsaac et al., 2022). The data collection yielded 4 sets of data: jam board entries, workshop recordings, workshop transcripts, and documentary photos.

The study design involved autophotography (Glaw et al., 2017), where pre-primary educators were asked following workshops 1, 2, & 3, to take photos that illustrate how numeracy and literacy occurred through play in their learning environments and to make reflective notes on how they see literacy being supported in their programs. Participants had the freedom to share photos that best represented the visibility of numeracy and literacy in a play-based learning environment from their own point of view. During the photo sharing sessions, participants gave a description of their photos and received questions about them from the facilitator and other participants. Each participant shared at least two photos across all six workshops and at the end of each photo sharing session, they were invited to brainstorm common themes using a virtual whiteboard application (McIsaac et al., 2022).

The Data

The data utilized in this investigation included transcripts of recorded discussions specifically in workshops 4 & 5, where the photo elicitation took place, in addition to all the documentary images and videos taken by educators, including those that were not discussed.

Regarding the rural and African Nova Scotian groups, the transcripts were in English., but the Francophone group transcripts were in French. An automatic translation using Microsoft Word was generated for the analysis of this group's transcripts. As a result, the language of the French quotations seemed somewhat awkward compared to the English quotations.

Data Analyses

The method of analysis used in this investigation is thematic analysis, and in particular the method proposed by Braun & Clarke (2022) and known as reflexive thematic analysis. Several researchers have used thematic analysis with visual methodologies such as photo elicitation to ensure comprehensive analysis of the visual, verbal, and written data (Glaw et al., 2017). Some of those researchers are Collier (1986), Noland (2006), and Thomas's (2009), who have established their own approaches to thematic analysis (as cited in Glaw et al., 2017).

Being "Theoretically flexible" (Xu & Zammit, 2020) this method acknowledges subjectivity and views it as strength (Braun & Clarke, 2022) therefore, resonates with my constructivist epistemology, as well as serves the purpose of finding patterns and common threads in transcripts.

Although the study uses secondary data analysis it acknowledges the connection between data collection and data analysis and finds it difficult to completely separate between both (Pink, 2004 as cited in Jenkings et al., 2008). Considering the reflexive nature of data collected through photo elicitation, it becomes rational to deploy reflexive data analysis to data that has been

constructed from the reflexive engagement between participants and researchers (Jenkings et al., 2008).

The Analysis Journey

Guided by the six phases of Reflexive Thematic Analysis (Braun & Clarke, 2022), The analysis journey involved six phases: familiarizing oneself with the data, generating codes, constructing themes, reviewing potential themes, defining and naming themes, and producing the report. The phases are summarized in Table 1.

Table 1

The Phases of Data Analysis

Phase	Description
Familiarizing oneself with the data	• Look for initial patterns and main ideas.
Generating codes	• Develop initial code book that consists of both deductive and inductive codes. • Perform initial coding using sample of data. • Refine codes and code definitions.
Constructing themes	• Complete coding of entire data. • Group codes and compile relevant segments of data to each code. • Develop potential themes.
Reviewing potential themes	• Review data for additional themes. • Add new themes.
Defining and naming themes	• Assess initial themes. • Define and re-name initial themes
Producing the report	• Produce written results in point form. • Select clear, concise, and meaningful images and quotes. • Write draft results section.

The journey began with familiarization with the data, where the discussions and images were scanned for initial patterns and main ideas. Some of the main ideas that emerged at this

phase were how educators meticulously plan the learning environment and how they utilize all their surroundings to create meaningful learning experiences.

Following that, phase two of the analysis involved development of an initial code book. To answer the first research question, deductive analysis was used to identify preliminary categories and sub-categories, where codes were pre-determined according to *The Six-Pillars of Reading Instruction* (Nova Scotia Department of Education and Early Childhood Development, 2023); i. Oral language, ii. Phonics, iii. Phonological awareness, iv. Vocabulary, v. Comprehension, vi. Reading Fluency. Writing was added as an additional category, being identified by the literature as a literacy skill (Blamey & Beauchat, 2016; Lonigan & Shanahan, 2010; McCabe, 2013;). To answer the second question a more inductive approach was undertaken where codes were generated from the data itself as the analysis proceeded. Both the deductive and inductive codes were developed with the intend to capture hidden or implicit meanings as well as those that are obvious or explicitly expressed.

To develop the codebook, two transcripts were initially coded after which the codes were reviewed to check if they work in relation to the entire data set. The revision was insightful as it significantly helped in refining the code labels and in generating code definitions that are clearer and more precise. For the deductive codes, definitions were obtained from the *The Six Pillars of Effective Reading Instruction* (The Nova Scotia Department of Education and Early Childhood Development, 2023), but for the inductive codes the definitions were derived from educators' discussions. Having codes with precise definitions was essential for coding data accurately to the different literacy skills and sub-skills, since some of the sub-categories involved skills that were similar to a great extent and difficult to distinguish.

As coding data continued, thoughts of whether interpretation and coding were being performed correctly, was a daunting challenge. Therefore, the coding was paused to revert back to Braun and Clarke (2022) chapter 7 on interpretation. A section on anxiety in doing interpretation was of particular interest as it provided tips on letting go of anxiety in doing interpretation correctly. Reading through the chapter helped ease anxiety and provided good grounds to pursue coding. The following tips from the book were particularly helpful in easing interpretation anxiety: Interpretation depends on context, both the immediate and wider context, interpretation needs to be defensible, and there is no single correct interpretation (p.201). The previous readings had helped in developing an understanding that interpretation is defensible when there are good grounds for what one is doing, and when one is not ignoring or leaving out inconvenient truths.

With those tips in mind, coding was resumed with more confidence. The coding resumed using a number of strategies to assist with the accurate interpretation of data. One of the strategies found significantly useful was getting closer as possible to the context where the activity or practice was taking place. The images and videos came in as complementary and significantly helped in filling in the missing pieces, providing a vivid look into the context. Another helpful strategy borrowed from Braun and Clarke (2022) was asking myself a set of questions before coding a piece of data: How do I know that this activity supports a certain pillar? Do I have evidence to support my interpretation? Is this based on a fact or an assumption?

As the coding proceeded, codes were grouped and relevant segments of data were compiled under each code, where they served later on as potential themes. After the entire data was coded, the data was reviewed for additional themes and refined further to produce the final codebook. Initial themes developed from the codebook were then defined further and re-named.

Themes were assessed according to how well they fit with the research questions and how well they capture the important patters across the data set (Braun & Clarke, 2022).

As the final themes were developed, named, and defined, it was time to begin transforming results into a written form. To begin with, findings were listed in point form under each theme, after which bullet points were transformed into coherent sentences and paragraphs. At this point it was also essential to select images and anecdotes from the data that clearly and concisely support interpretation of results.

Coding Images and Videos

The photos and videos that were discussed in the sessions were not interpreted on their own but rather in conjunction with participant commentaries to minimize misinterpretation of images (Glaw et al., 2017). Some of the photos and videos taken by participants were not discussed in the sessions but contained valuable information relevant to this investigation. Therefore, it was decided that they should be coded. The same codebook was used but this time the coding was performed semantically, where images were analyzed for visual elements of literacy and intentionality, capturing only the explicit and surface meanings of the images.

Research Ethics

Ethical considerations throughout this study were guided by Mount Saint Vincent University Research Ethics Board (UREB) which is in turn guided by the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2). Since the research used secondary data, the research study was also committed to ethical considerations provided by the Early Childhood Collaborative Research Centre Student Thesis Agreement.

The research project *Supporting Numeracy and Literacy in Play-Based Early Learning Programs* that yielded the data under study, had obtained ethics clearance in January 2022 after

fulfilling ethical requirements of the TCPS2 and the UREB. Participants of the study provided their informed consent prior to the study. Participation was voluntary and participants had the freedom to withdraw from the study at any time. To mitigate potential risks associated with using photographs as a primary form of data collection, the Numeracy and Literacy study addressed ethical considerations in documentation in a preliminary workshop to ensure these risks are considered in the data collected as part of the research.

Chapter 4: Results

Introduction

This section provides a comprehensive and descriptive account of the data analyzed and interpreted during the investigation. It serves as a platform to showcase the findings obtained, ultimately answering the research questions of the study. The results are presented in this chapter according to their relevance to the two research questions. Before delving into the results, I will give a detailed account of participants.

Participants

Three groups of pre-primary early childhood educators from three different communities were involved in obtaining the data used in this investigation. The recruitment and selection of participants were accomplished by the larger project research team, based on the unique community perspectives and opportunity gaps in professional development and expectations for numeracy and literacy. A total of 17 pre-primary educators with varying years of experience were recruited, 5 of which were from 3 rural regional centers of education (RCE) across Nova Scotia, 4 participants identified themselves as Black or African Nova Scotian and four participants identified that they worked in a community with a population of African Nova Scotian students and families and the last 5 participants belonged to Francophone communities working in the Conseil Scolaire Acadien Provincial (McIsaac et al., 2022). Below is a table showing each of the Participant groups, number of participants in each group and a description of each.

Table 2

Participant groups and Description

Group	Number of participants	Description
Rural Communities	5	From 3 RCEs across Nova Scotia, years of experience ranged from 15 to 22 years.
Black and ANS Communities	7	From 2 RCEs across Nova Scotia. Four participants identified as Black or African Nova Scotian (ANS) and four participants identified that they worked in a community with a population of ANS students and families. Years of experience ranged from 4 months to 30 years
Francophone Communities	5	Pre-primary educators working in the Conseil Scolaire Acadien Provincial. Years of experience ranged from 9 to 22 years.

How Can Intentional, Purposeful Literacy-Learning Through Play Support the Foundations of Early Literacy?

Deductive coding was used to address this research question in order to identify preliminary categories and sub-categories, therefore this section presents the results in a categorical descriptive form, beginning with the category of highest frequency. Table 3 'Category Summary Table' provides a summary of categories and sub-categories that occurred in the data. The table also provides the frequency(fr) of each category and sub-category in the data, definitions, and provides an example for each.

Table 3

Category Summary Table

Category	Description	Fr	Example
Writing	When educators refer to opportunities, activities or practices that support writing skills.	58	
Print Awareness	When educators refer to activities/practices that support print awareness, i.e., understand that print carries meaning, or when children use written symbols to represent meaning.	28	"We had taken out the clipboards with markers and pencils, paper, then each with their board, then we just started drawing and documenting because I was talking with the students, sometimes, when we see things, then we want to remember them, but the rest of us, we can document it. Then […[3]] they would start drawing and then writing, write and then scribble a little on their paper…"
Fine Motor Skills	When educators refer to opportunities/ activities that support the development of fine motor skills e.g., coloring, writing, painting, cutting, activities that require coordination of small muscles in hands and fingers.	58	"It's great. They love to paint like I could put paint in on the building and they'd paint off it. All my kids really enjoy painting. It's probably their favorite thing to do."
Oral Language	When educators refer to an activity or skill that promotes spoken language and language production.	49	
Phonology	When educators refer to opportunities/ practices that support phonology, i.e., awareness of sounds in spoken language.	2	"She doesn't like to press, and she doesn't like the—the toy to actually tell her what it is, she wants to learn to pronounce those objects, each picture that she sees […] So, she's like she's. Actually, putting her own effort to support her own speech."

[3] '[…]' indicates where irrelevant text has been removed.

Category	Description	Fr	Example
Vocabulary	When educators refer to opportunities/ practices that support demonstration of knowledge of the meanings of words and phrases in spoken language.	19	"We are fortunate to have trails behind our school […]. And as the children were looking out over the trails […] they're saying different things that they think they see, but it was interesting to see what the children thought they see or wanted to see."
Pragmatics	When educators specifically refer to an activity/ opportunity or practice that supports pragmatics, i.e., adapting language for a range of purposes and audiences, listening to infer meaning, expressing thoughts and feelings, responding to and giving simple directions or instructions.	19	"… we were having a group discussion and it was all about feelings. And then (child's name) […] walked over, and she decided she wanted to paint. And when she was painting, she was talking about how much she loves her cat and her dog and her favorite color is purple […] and this story went on for about 15 minutes, if not longer. And she was really in depth."
Discourse	When educators specifically refer to an activity/ opportunity or practice that supports discourse, i.e., how to tell a story using detail when sharing experiences, how to ask and respond to questions.	18	"So I happen to come across dinosaur bones that were in all different sizes […].And he started out by lining them up from size, like from the biggest to the smallest, and then he slowly took and put them in a shape and put the claw on the end and he said it's a scorpion tail […] and as he's doing it, the kids are asking him questions[…] and he's explaining[…], he's always telling them why he's doing it and how it works and explaining it all out […]."
Morphology	When educators specifically refer to an activity/ opportunity or practice that supports morphology, i.e., hearing and saying a root word with a prefix or suffix, using plurals, possessives, different verb tenses, conjunctions.	2	"… the fact that I heard them play then laugh and then repeat "said he, says he, says she, she said" without necessarily using it in the right way. Then I made sure when we reread a story, then to emphasize these bits of sentences there and then try to make them understand that."
Syntax	When educators specifically refer to an opportunity, activity	34	"But one of the ones like I like for literacy for our kids is their portfolios

Category	Description	Fr	Example
	or practice that supports the ability to use Syntax in spoken language, i.e., speaking in complete sentences, using correct word order, using connecting words, using descriptive words to expand sentences, using pronouns.		because I keep them on our book rack so that they have their names on them and they're so often just sitting on the coach together sharing their stories from their books together, talking about different things that are happening, asking each other questions about what's going on. So, it's like a great conversation piece with their portfolios."
Phonics	When educators mention activities or practices that promote letter and sound correspondences, the relationship between letters, letter blends, and identifying words 7-word parts.	40	
Word Recognition	When educators refer to activities/practices that support word recognition, i.e., Identifying words and word parts, identifying high frequency words that may have irregular spellings.	7	"And everyone has a book and either reading to a friend or reading independently […] everyone was reading out loud or whispering. So, I can really hear what he is saying? Uh and I took a little video. It was so cute everyone said words in English, words in French, they try to read the words, there were those who came to ask me, Madam this word, what does it say?"
Application of Alphabetic Knowledge	When educators refer to opportunities/practices that support knowing and using letter-sound correspondences for consonants and vowels to decode VC, CVC words in isolation and in connected text, blending consonants and vowels in isolation and in connected text, blending more complex letter combinations and digraphs seen in familiar texts.	29	"But I have -- one of my little boys, I discovered that he could read already, because it was- Wife was the word, but […] I was expecting It's mom, woman, something like that. Then he looks at me and then he says wife."

Category	Description	Fr	Example
Alphabetic Knowledge	When educators refer to opportunities/practices that support alphabetic knowledge, i.e., connecting most consonant sounds with the letters they represent, connecting a short and long vowel sound with the letter it represents, recognizing that all letters are either consonants or vowels, recognizing the direct relationship between letters (consonants, vowels), letter combinations (blends, digraphs) and sounds.	21	"Then ___ (Children's name) found a lead pencil on the ground broken. Then she started writing on a rock, and then she would show me the rock and say "look when I move like this, we see the letters" because it was just a pencil. Then she says, "Look, I did an A" and then I don't remember if she wrote her name. But in any case, she had written, there was an A…"
Comprehension	When educators refer to activities or practices that support making meaning from text.	22	
Word Recognition	Where educators refer to activities or practices that promote accurate and efficient word reading	5	"Then they started to take turn with the books, and then she sometimes lets them read, like independently yes, once during the reading, she decides, OK, now it's me who goes, who will choose the book? I'm going to read that book to you. And then she starts with her finger on the words to read, the book of course, -- she can't read, but it was so cute to really see her little finger following the words, one by one."
Responding To Text	Where educators refer to activities or practices that promote making connections to new information, retelling the story visually and/or orally, engaging in conversation about their understanding of a story, summarizing a story, giving personal opinions about a text, asking questions about a text.	15	"Yeah. Yeah. She was out—out loud, retelling the story, and she had all the like, key components of the story. She was making some of the voices, like of the pigs and the—the wolf like we do when we read the felt stories. So yeah."

Category	Description	Fr	Example
Strategic Processing of Text	When educators refer to activities or practices that support using comprehension strategies to build and monitor understanding searching for and using information, self-monitoring and self-correcting, knowing and using letter-sound correspondences to solve unknown words, building knowledge and vocabulary related to a variety of concepts, inferring the meaning of new vocabulary.	7	"She picked one of the books and she started describing each picture. On each page, like describing how each child is standing by the window, looking out on the rain, and she was explaining to her friends doing some demonstration."
Print Concepts and Text Features	When educators refer to activities/practices that support directionality, one-to-one word matching, distinguishing between letters, words and sentences, attending to punctuation.	20	"…here she is telling the story to her friends, imitating me […] and there I went to see, […] but she even did with the finger for the words and everything, I was like wow she sat during the whole story, all the pages."
Engagement With Text	When educators refer to activities/practices that support selecting a variety of texts as sources of interest, enjoyment, and information selecting fiction and information texts with a variety of text features, selecting texts reflective of diverse experiences and perspectives to grow background knowledge, growing background and vocabulary knowledge about concepts and topics.	10	"So, this is just this little girl was- we have bins made up in the classroom with props to retell some of our favorite stories. So, the Three Little Pigs has been the story the children have really enjoyed this year, and we have a felt story that we read quite often, and puppet show set up with, like, retelling the story. And then this was just another way that we were offering for them to retell, and she had it all set up and she was like retelling the story as she remembers it."
Vocabulary	When educators refer to activities or practices that support knowledge of word meanings and the context for using words. Includes synonyms, words for describing	18	"It also extended on literacy. Because they were learning the vocab- different vocabularies, so some of the words we saw were cars and trucks. University was one, school, cement truck, transit bus, apartment,

Category	Description	Fr	Example
	time, size & color, and broad categories of words (food, animals, clothing).		pharmacy. Street sign. So, there was all these different vocabulary words that they may or may not have known. House was probably the most common one that they would all know."
Phonological Awareness	When educators refer to activities or skills that support sensitivity to sound structure, hearing, and manipulation of letter sounds.	13	
Word	When educators specifically refer to opportunities/ practices that support distinguishing a word as single distinct meaningful element of speech or writing.	9	"He tries to read the words, there were some who came to ask me, Madam this word, what does it say? "
Phoneme	When educators refer to opportunities/practices that support phoneme awareness, i.e., identifying words with the same beginning and ending phonemes, segmenting the sounds in a word with three sounds: CVC, blending two or three phonemes to make a word, deleting, adding, and substituting beginning and end sounds in words.	8	"…And then I hid the letters. I chose each child's letter (first letter of their name) then I hid them somewhere […]. Children hide their eyes and then everyone just has to find their letter. If he found his friend's letter, he should not touch. They loved this game because also at the end of the game, they found that there are children, that the same letter can be in several words., and in many names, it can also be the first letter, the initial or it can be just the last or in the middle of the word."
Onset & Rhyme	When educators refer to opportunities/practices that support onset & Rhyme, i.e., blending onsets and rimes, manipulating, and substituting onsets and rimes.	0	
Syllable	When educators refer to opportunities/ practices that support blending spoken syllables together to form 2 or 3 syllable words,	0	

Category	Description	Fr	Example
	identifying syllables in a word, manipulating syllables in a word, substituting a syllable in a word.		
Rhyme	When educators refer to opportunities/practices that support knowledge of Rhyme, i.e., generating rhyming words, identifying when spoken words rhyme and when they do not rhyme.	0	

The Foundations of Literacy

In general, the discussions and images revealed an abundance of literacy learning opportunities. Below are the pillars of literacy instruction from highest to lowest occurrence and the ways in which they were supported in the investigated Pre-primary Program settings.

Writing. Educators' discussions and documented images revealed numerous opportunities supporting print awareness and fine motor skills. Discussions and images displayed children constantly engaging in activities that require the coordination of small hand muscles with eye movement such as, colouring, painting, cutting, using tongs, and handling small loose parts such as chickpeas, beads, dice, and others.

During both indoor and outdoor play children are seen engaging in meaningful writing activities. Children trace, colour and form letters

Figure 1

Symbolic Representation During Play

using pencils, pens, markers, and chalk, and are surrounded by surfaces that invite writing such as paper, easels, and boards. Writing is not limited to the indoor environment. The images and discussions often show children writing outdoors using water and paintbrushes, writing with chalk on rocks or on the ground, and mark making on trees. Educators indicate that even though they may not be actually writing, children give meaning to their scribbles, random letters, or symbols as they communicate in play as shown in figure 1. Children additionally engage in other writing activities such as story writing, reflecting on activities, making cards and books or recording observations as in figure 2.

Figure 2

Child Documenting What They See

> *"We had taken out the clipboards with markers and pencils, paper, then each with their board, then we just started drawing and documenting because I was talking with the students, sometimes, when we see things, then we want to remember them[…] then they would get on board right away and then they would start drawing and then writing, write and then scribble a little on their paper…" [Francophone Community]*

Additionally, images and discussions provide information that children are exposed to various forms of meaningful text both in the classroom and in their school neighborhood. Children have access to a variety of books and are surrounded by labeled areas or items. Educators often model drawing and writing for various purposes. As they go for walks in their neighborhood children notice signs and begin to associate the letters and text with meaning.

Oral language. The data provided ample information and examples of how oral language is supported in the investigated settings. Educators often spoke about how they supported oral language in their environments referring to various activities such as dramatic play, singing songs, art, and storytelling.

When engaged in meaningful purposeful child-led play, or collaborative activities, children shared ideas through oral language, discussed and defined roles together and gave each other instructions. It was common in educators' stories to see children engaging in deep conversations during role play. The following example demonstrates how role play was an opportunity for children to demonstrate their oral language skills.

> *"You should know that the little girl who is on the left, she has a lot of difficulties in fact to speak, so in terms of articulation most of the time it is quite complicated to be able to understand her and so generally she does not express herself much, so I found it extraordinary in fact that she wants to take the role of the educator. So, I found it interesting that she took the role of the EDUCATOR because suddenly, I sometimes feel like I talk too much and so she has made a lot of effort to be able to articulate, especially with the mask on top so I found it really impressive that she takes this role." [Francophone Community]*

Educators often referred to how purposeful play encourages oral expression. When children are intrigued about an activity of their choice, they are motivated to explain what they are doing and engage in conversations with their educators and peers around their discoveries, accomplishments, thoughts, and feelings.

> *"I really enjoyed this picture because we were talking about feelings. And we were having a group discussion and it was all about feelings. And then (child's name), this little girl walked over, and she decided she wanted to paint. And when she was painting, she was talking about how much she loves her cat and her dog and her favorite color is purple […] and this story went on for about 15 minutes, if not longer. And she was really in depth." [ANS Community]*

The data also shows how educators encourage oral communication and allow the time and space for children to engage in long and meaningful conversations. One-way educators create meaningful conversations is using documentation of student work, such as portfolios,

documentary images and videos to engage with children in reflective conversations that involve storytelling, asking and responding to questions, and sharing feelings and thoughts, thus demonstrating several oral language skills such as syntax, discourse, and pragmatics.

Figure 3

Discussion Initiated Around a Book

Books also served as a contributor to oral language development. Children commonly used the pictures in books to discuss information, retell stories, share their knowledge, and relate pictures to their personal lives as seen in Figure 3.

"I like -- books like that too because often, that's where you're going to hear them. They're going to start talking about what they know. […] I hear discussions in the class that starts from a picture where there are not even words, then it's just -- there you see they're going to show you what knows, what do they know." [Francophone Community]

During purposeful play, children often demonstrated their knowledge of word meaning and practiced using vocabulary of broad categories such as animals, nature, size, and color. Interacting with different materials and in different environments such as the outdoor environment, also supported knowledge of word meaning and proper use of vocabulary in spoken language.

> *"We are fortunate to have trails behind our school. And so, we go on the trails quite often. And as the children were looking out over the trails […] they're saying different things that they think they see, which I thought was quite interesting, cause none of those things are near us. But it was interesting to see what the children thought they see or wanted to see." [ANS Community]*

Finally, a few anecdotes demonstrate support of the awareness of sounds in spoken language. This was mostly emphasized when children tried to spell words or names using their knowledge of sounds.

Phonics. One of the common literacy skills inferred from the discussions and images was phonics, where educators referred to practices that support letter and sound correspondence, the relationship between letters, and word identification.

Educators' stories and images uncover children's passion about letters, where they are often seen writing the alphabet in various contexts. In their outdoor and indoor play children were seen making letters with paint, water, sticks, and big chalk. In addition to using traditional writing tools such as pens and markers and writing on erasable boards, children involve letters in their play by making letters from playdough, Lego, or by printing letters on rocks (figure 4). Educators often engage children in playing games around letter recognition and associating sounds with letters, such as going for a letter hunt. In the outdoor environment children seem to look out for letters and begin to notice them on signs, car license plates, and find associations of letters in nature.

Figure 4

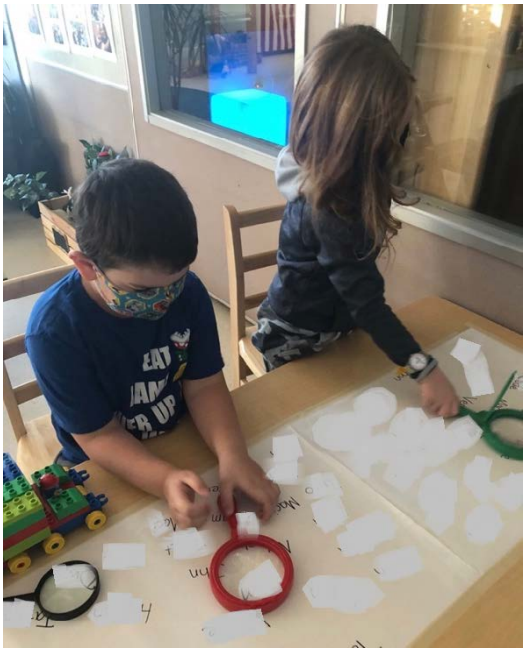
Child Printing Letters on a Rock

> *"So, as part of our garden project the children have been collecting worms to put in our composter. So, this little girl she just came over and she started, like, squealing with excitement because she found this worm and it's shaped itself into the letter L and her name starts with L. […] And she came over and she said, look, look, the worm. It loves*

me because it made the 1st letter in my name and she was very, very excited. And she was convinced that this worm was now her very best friend because of—of course, it made the 1st letter of her name. So." [Rural Community]

Figure 5

Name Recognition Activity



A common practice also linked to phonics is when children engage in games and activities that support recognizing, spelling, and reading one's own name. Both discussions and images display children applying alphabetic knowledge in spelling and printing their names or forming their names using various materials such as playdough, sticks, and letters printed on stones. Some examples of how educators support name recognition is, displaying children's names on the board or wall, labelling portfolios with children's names, and setting up invitations where children practice identifying and forming their names (figure 5).

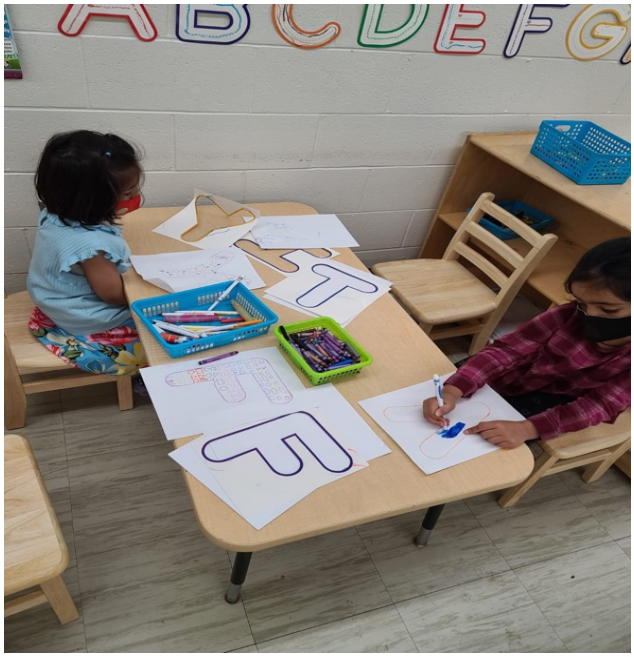
In general, educators support phonics skills by utilizing a wide range of resources. Books were noted several times as a resource that supports word recognition. Educators indicated that through repetition and breaking down complex books, children become familiar with words and are able to recognize them and read them independently. A few children could read words by using letter-sound correspondences to decode words.

In addition to books, materials and resources used by educators to support alphabetic knowledge include letter stencils, laminated letter sheets, magnetic letters, and having big letters on display

(figure 6). While those sheets may look traditional, they are used as invitations for children to color and decorate.

Figure 6

Children Coloring and Decorating Letters



Phonological Awareness. Data provided information on how play supports phoneme awareness as well as distinguishing words as a single element. Guided reading and storytelling appeared as common practices that support phonological awareness. As teachers model pointing at words during guided reading, children begin recognizing words as distinct and meaningful elements of the text. When handling books independently children begin to point at words and follow them word by word.

> *"There is (Child 2) who took charge of reading stories to the 2 girls […] and she gave each girl a book. Then they started to take turns with the books, she sometimes lets them read, like independently yes, and during the reading she decides, OK, now it's me who goes, who will choose the book? I'm going to read that book to you. And then she starts with her finger on the words to read, the book of course, she can't read, but it was so cute to really see her little finger following the words, one by one." [Francophone]*

While most of the children in pre-primary have not yet acquired the skill of blending and segmenting letter sounds, a few teachers mentioned children actually beginning to blend sounds to read words. Additionally, some educators shared how children demonstrated phoneme awareness in the outdoor environment by reading signs as they walked on a trail, or by recognizing letters in words on car plates.

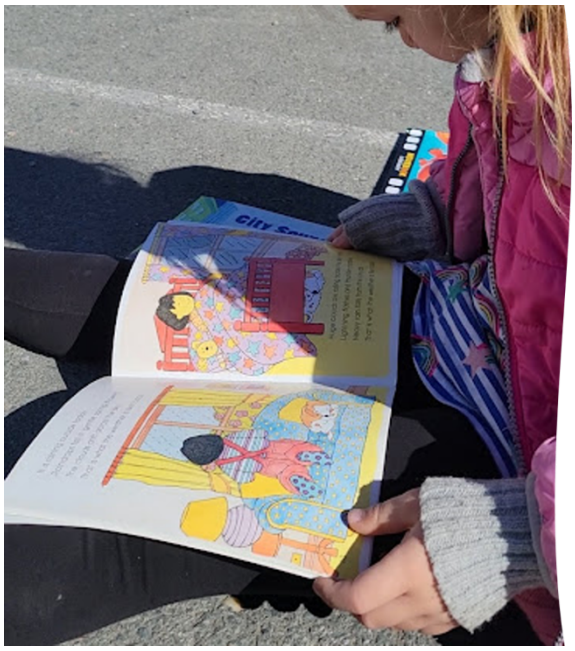
Another skill that children demonstrated when reading books that relates to sensitivity to sound structure is being able to notice words that begin with the same letter, or noticing words that have the same letters as their name. Moreover, children demonstrated the ability to break down sounds in a word when they attempted to spell words or their names, or when given the opportunity to produce text, for example making cards, writing lists and reflective notes where they use a mixture of letters and drawings. Another way described by a few educators that children learn to manipulate sounds, is playing games that involve identifying initial sounds of words, such as eye-spy.

Comprehension. Educators commonly referred to practices that support meaning making from text, word reading, print concepts and text features. There were numerous anecdotes that showed children processing, responding to, and engaging with text.

Children have access to a variety of books such as picture books, story books, fairy tales and reading books that incorporate pictures with text to facilitate word reading. Educators mention reading the same book several times focusing each time on a different aspect of comprehension. During guided reading and independent reading accurate word reading is supported and children begin to distinguish between letters, words, and sentences. Children demonstrate using strategies to process text through image interpretation. Children are often seen describing and analyzing pictures and illustrations in books or using them to create their own narratives. The following anecdote demonstrates a child inferring meaning from pictures as a processing strategy (figure 7).

Figure 7

Child Retelling Story from Images



"She picked one of the books and she started describing each picture. On each page, like describing how each child is standing by the window, looking out on the rain, and she was explaining to her friends doing some demonstration. You can see the first picture she actually raised her hand look up in the sky and at that picture, what she was trying—trying to tell them what it is raining…"

Most commonly children are introduced to text features and concepts of print through guided reading, where educators model reading books emphasizing the direction of text, turning pages from left to right, pointing to word by word as they read through books. Then children demonstrate those skills as they imitate educators and read books independently or to their peers. Additionally, educators build activities around books and make connections with text to support meaning making and understanding, such as posing questions and initiating discussions around new information.

> *"It's a book I've read maybe once or 2 times before, but we've been really interested about insects lately. Then it's called under my rock, […] we did an activity with the book before this happened. I read the book, we went outside with magnifying glasses that we kept under the rocks for insects and all that." [Francophone Community]*

Figure 8

Storytelling Using Props

Moreover, educators commonly set-up invitations around favorite books, and create props to support elements of stories (figure 8) thus bringing books to reality and inviting children to re-tell their favorite stories.

"So, this is just this little girl was- we have bins made up in the classroom with props to retell some of our favorite stories. So, the Three Little Pigs has been the story the children have really enjoyed this year, and we have a felt story that we read quite often, and puppet show set up with, like, retelling the story. And then this was just another way that we were offering for them to retell, and she had it all set up and she was like retelling the story as she remembers it..." [Rural Community]

The data shows children responding to books in various and numerous ways. Educators share stories where children are inspired by books read at home or in class. For example, use blocks to construct an object from a story, and painting or drawing something inspired by a book they read. Some children respond to text by having discussions around stories, by role-playing or acting out

Figure 9

Children Engaging with Books

actions they see in book images. Children are often seen selecting books and reading independently (figure 9). Children further engage with books by extending them to their play. Children also request to read certain books, and educators are keen about making favorite books accessible to them.

Vocabulary. The data discloses several opportunities where children either build-on or acquire new vocabulary. Accessing and reading books and storytelling occurs as a valuable practice for introducing new vocabulary, especially when educators emphasize word meaning through activities and props. For example, an educator narrates, "…and there is the 3 little pigs, […] it is good to encourage because they can identify "house", "woman", "man", "bear", makes it great for vocabulary and it gets them into the story.".

Frequently interacting with the outdoor environment similarly supports a wide range of vocabulary. Educators spoke about children acquiring vocabulary such as names of clouds, animals, insects, buildings and means of transportation, as they ask about and learn the names of things they see.

> *"So, we have a variety of buildings in the lots of spaces to go for a walk, and this was actually an extension from a previous walk […] It also extended on literacy. Because they were learning the vocab- different vocabularies, so some of the words we saw were cars and trucks. University was one, school, cement truck, transit bus, apartment, pharmacy. Street sign. So, there was all these different vocabulary words that they may or may not have known. House was probably the most common one that they would all know." [ANS Community]*

During various play activities children are noted engaging in conversations using a wide range of vocabulary including color, shape, and size. The ample materials and toys surrounding children in their learning environment also introduce them to new vocabulary, for example an educator described how having a tub of toy dinosaurs was an opportunity for a child to demonstrate knowledge of vocabulary related to dinosaurs.

> *"So, we have a big bin of dinosaurs like of all different kinds of dinosaurs, and the line them up and match them to the different family's kind of thing and they'll talk about how some are Flyers. Some like to swim. Some eat from the trees and some like to eat each other. And then they- they'll name them like one. We've got probably about three kids in our class. I'd say, A06, wouldn't you that know the actual names of all the dinosaurs yeah." [ANS Community]*

Reading Fluency. The sixth pillar of effective reading instruction 'Reading Fluency' is an advanced skill that is not expected until grade 2 (Kim, 2015). Therefore, has not been included in the results section but elements of reading fluency are addressed in the discussion section.

How Does the Educator's Role Influence the Intentionality and Purposefulness of Play?

To answer the second question a more inductive approach was taken for thematic analysis, and five main themes emerged from the data that show how educators can influence the purposefulness of play through intentionality. The identified themes are: 1. Designing the environment 2. Selecting Materials 3. Building interest and Extending Learning 4. Providing invitation and provocation 5. Reflecting and Documenting. The following table 'Theme Summary table' lists the identified themes and includes a description and example of each theme.

Table 4

Theme Summary Table

Theme	Description	Example
Designing The Environment	How educators plan and utilize both the indoor and outdoor environments to support learning and create meaningful experiences.	"… I found the big wooden letters in Dollarama, then there is at the top a large room that is used as a gym, it is just an empty room. […] and then I hid the letters. I chose each child's letter then I hid them somewhere in the drawers and on the window somewhere. Children, hide their eyes and then everyone just has to find their letter."
Selecting Materials	Carefully planning materials and using them in innovative ways to draw interest.	"it's a nice way of like showing that sometimes we -- can change tools, then it gets better, even if it works with the big ribbons, it's sometimes that, it's just fun to show them that there are different tools that can be used to do the same thing."
Building Interest & Extending Learning	When educators show responsiveness to children's interests, support or build on a child's interest to create a learning opportunity or to extend the learning around a certain skills/topic.	"So, we take books and all the toys that we know that they enjoy to play with, we take it outside and we like to extend it. We would like them to extend play with it so you see them bringing like flowers, trees..."
Providing Invitation & Provocation	When educators refer to inviting learners or provoking learning of a specific literacy goal	"So, I happen to come across a dinosaur bone that were in all different sizes. So, we put them on the table as an invitation with the measuring tapes and paper, and they managed to find it, I didn't notice, but there was one dinosaur claw in the bag."
Reflecting & Documenting	Involves capturing and recording children's learning experiences, observations, and progress and thinking back on experiences, activities, and learning moments.	"…I have their portfolios in there cause their picture is on the front of it so that they can read their name and find theirs, and it's artwork that they picked to put in it. --and then there's like different things that's happened throughout the year, like whether it be like a—a group shot of something we were all doing or like the pumpkin cleaning."

Intentionality heavily appeared in educators' anecdotes and images demonstrating the significant time and effort exerted in observing, reflecting, and planning all the aspects of learning. The themes identified under intentionality were highly inter-related making it difficult

to speak about one without mentioning the other. Therefore, some topics re-occur under more than one section.

Designing the Environment

The data provide abundant information around how educators plan and utilize both the indoor and outdoor environments to support learning and create meaningful experiences. As a result of the intentional design of the learning environment, a purposeful and engaging space was developed for children to support learning through open-ended play and exploration.

Figure 10

Glimpse of Environment Organization

Images and discussions reveal various ways in which educators support learning by creating an inviting and rich environment. Figure 10 shows a glimpse of how the indoor environment is organized in one of the pre-primary classrooms. Images commonly show colorful wall displays, flexible furniture arrangements, movable learning materials, and versatile spaces allow for various learning configurations and experiences (Figure 11). Educators commonly organize the indoor environment by dividing the space into functional zones for children to freely navigate and engage with different activities. Learning zones such as art area, science area, dramatic-play area, construction (block) area, and sensory area, serve as dedicated spaces for specific learning experiences.

Figure 11

Children Making Arrangements Using Movable Furniture During Dramatic Play

often connect literacy and numeracy to the outdoor environment, where children frequently appear playing around trees, exploring nature elements such as clouds, birds, and worms, and going on walks in the neighborhood or on trails (Figure 12). Among the activities that children engaged with outdoors were going on a nature walks, planting, having picnics, water play, reading outdoors, and going on scavenger hunts.

Another common observation is that educators and children extend learning across different areas and rooms within and beyond the school grounds. Outside the classroom learning extends further to other places within the school like the gym and school playground.

Pre-primary children appear to be spending a significant portion of their time outdoors, and educators appear to be equally or more intentional about outdoor play. Educators

Figure 12

Children on a Number Hunt in the Neighborhood

> *"And we actually got to do that today. So, we brought out some clipboards and paper and went through. The hike through the woods and they found they did like a color hunt. So, they were tallying how many things they found in in nature, like of a certain color and yeah." [Rural Community]*

As much as the educators demonstrate intentionality, they also demonstrate flexibility with how children utilize and manipulate the learning environment. There are several occasions where educators and children bring materials from one environment to the other, for example bringing out books, or equipment such as art easels from the classroom to the garden.

> *"We have a garage or barn outside, of course, and it's filled with one of the art easels that we've taken out. And we also take out rolls of paper and lock it up on the fence at the back fence and with clothes pins and hang it up and let them paint that way." [ANS Community]*

In conclusion educators consider a lot of aspects when designing the learning environment such as comfort, accessibility, safety, appeal, and inclusivity. By making those considerations educators create engaging and welcoming spaces that foster children's curiosity, exploration, and joy of learning.

Selecting Materials

Materials appear often in educators' stories in relevance to creating a rich and resourceful learning environment, where they spend significant time and effort in planning and selecting materials, "So we have to look at our classroom and every day I look at the classroom and I'm like, OK, how can I use these materials in a very innovative way that's gonna draw the children's interest" (ANS

Figure 13

Various Materials and Loose Parts

Community Participant, 2022). Materials are commonly used as manipulatives to set up invitations and provocations, build interest, and extend learning. Educators share numerous stories on how they equip their environments with diverse materials, buy things from the dollar store, bring in things from their home, and create resources that add to the richness of the learning environment.

The data reveal a diverse broad range of materials that include school supplies, learning aids, toys, nature elements, science materials, art materials, and loose parts (Figure 13). Children usually mix between materials and move materials around from one area to the other. Children are often seen taking classroom materials outside or bringing nature elements into the classroom.

Materials constitute the majority of children's play. In dramatic play, children use toys, props and various kinds of materials such as pretend food, cash register, puzzles, Legos, wooden bricks, and connectors (figure 14). Outdoor, children are often seen playing with nature materials such as rocks, sticks, acorns, water toys, and using exploration tools such as binoculars, measuring tape or magnifying glass. Loose parts were also commonly described as a material used for play in the pre-primary program, among the commonly used loose parts are chickpeas, marbles, beads, popsicle sticks,

Figure 14

Child Using Props for Pretend Play

ribbons, rubber bands and dice, which children commonly used for counting, sorting, forming letters and shapes. Art materials including paint, paint brushes and easels, yarn, peg boards were also commonly cited in the data where children play both indoors and outdoors.

Discussions in the data reveal that educators carefully plan the use of materials and look for innovative ways to draw children's interest in learning. Sometimes educators make variations to materials or create their own to provide purposeful invitations such as multi-purpose laminated sheets for children to write on, laminated numbers & letters, paper money, and story bins. For example, an educator speaks about providing popsicle sticks with magnets: "*We have popsicle sticks with magnets on them and they're on our wipe off boards and they'll [children]build anything from their names to houses and put the magnet farm animals in it and stuff." [ANS Community]*

Educators speak about the various benefits of having a wide range of materials present both in the indoor and outdoor environments, stating that it inspires children to create learning opportunities, supports numeracy and literacy learning, and creates conversations and discussions among children. For example, an educator describes how availability of various materials allows children to learn how to choose tools carefully.

> *"But I think it also brings a nice possibility to introduce that sometimes you have to choose the material properly, choose the tools appropriately. I have girls who are still writing books there, and then, they started asking me for sheets with lines to write on the lines, and there are some who write really small, but they still choose the big markers to write [child says] " I do not see my A well […] [educator explains to child] when you do your letters […]the big marker writes too big you need a thinner pencil . [educator gives another example] same thing when we explained the paint. You can do more detail with a small brush rather than the big one." [Francophone Community]*

Providing Invitation and Provocation. Invitation and provocation are two approaches commonly described to engage young children in active learning experiences. An invitation is an intentional set-up or arrangement of materials and resources. Provocation refers to intentionally

designed learning experiences for the purpose of enticing children's learning and understanding. Discussions show how careful educators are in planning their invitations and provocations, by carefully selecting materials and choosing the time and place of the invitation.

The data reveals how invitations and provocations of learning were highly connected to the environment and the selection of materials. Educators described how they planned and set-up the learning environment to be inviting, attractive and visually appealing. Such practices include using attractive arrangements and engaging displays to capture children's attention as well as taking activities to different environments for more invitation and provocation. colors, textures, organization, and presentation of materials all contribute to creating an enticing learning environment.

Most of the invitations and provocations planned by educators were built around devising certain materials/ resources to promote specific developmental areas and learning experiences. Data also showed the use of open-ended materials as invitation and provocation as a common practice in the investigated pre-primary program settings. Educators described setting -up invitations that feature materials that allow for multiple interpretations and various ways of play and exploration (figures 15 & 16).

Figure 15

Child Exploring Science Invitation

> *"... I have plenty of I'm going to say science material there, but actually, it's -- loose parts. Then I have some instruments, my magnets are there, my hourglasses are there, my scale is there, I have another scale also for weight, my beakers are there, [...] I just put it there, it's free, and then they'll explore." [Francophone Community]*

Additionally, educators made invitations accessible by organizing materials in a way that encourages children to independently access and engage with them. Clear labels, visual cues, and accessible storage systems allow children to easily find and explore invitations.

The narratives and images showed educators practicing provocation by posing questions, and by making variations to previous activities. For example, substituting one material for another and observing how children interact with the new variation, or sometimes by modelling or demonstrating a certain way to use a material.

> *"We have lots of paper and I even put the roll paper on the floor. And one day they didn't even know what to do with it. […] And they said, why is that on the floor? They didn't know what to do. I said, well, I'm going to draw a picture and then they just came after that." [ANS Community]*

Figure 16

Children Exploring an Invitation with Sticks

Educators described their flexibility with their invitation/provocations, even if they set something up for a certain purpose, they did not direct the children towards the invitation nor towards what to do with the materials. Some educators mentioned having the invitations hidden for the children to find, and some mentioned that their invitations did not go as expected, but they embrace the children's choices.

Building Interest and Extending Learning. This theme refers to the intentional efforts made by educators to create interest or to capture and cultivate children's interests and curiosities to motivate and engage them in learning activities and spark their interest in exploring further.

Educator's stories emphasized a child-centered approach providing rich information with regards to responsiveness to children's interests where educators often tailor learning experiences to individual children, allowing them to pursue their passions and curiosities, and incorporating their interests into the curriculum.

> *"It was the children who showed the interest. They wanted to see the size, the length of the earth worms, is it short, is it tall, then I said we will measure them. Then what I found interesting is that it looks like roles have been defined. There were the earth worms, there were those who reported that there were earthworms, there were those who monitored the earthworm, those who measured the earthworm, and those who wrote the data, it's really a big team effort..." [Francophone Community]*

Most of the invitations set-up by educators began with children showing interest or are initiated by the children themselves. Educators also plan learning activities and next steps according to children's interests and directions. Figure 17 shows an outdoor activity planned to extend children's interest in measurement. Another educator speaks about how children's interests inform the direction of learning.

Figure 17

Children Extending Learning on Measurement

> *"Tomorrow, I think it's going to go in another direction tomorrow because they were talking about things that could measure up to the same size. So, I'm going to bring out different materials, like blocks that they can…maybe they'll use it to measure up to see if it's the same height or how many blocks it takes to be that tall. Because they were kind of doing that, like as it was like. Ohh. Like with the marker and whatever so. I can see that extending into lots of measuring now." [Rural Community]*

Figure 18

Extending On a Child's Interest in Building Blocks

Educators give various examples to build interest and extend learning such as providing favorite books and materials. Figure 18 for example shows how an educator extended on a child's interest in building blocks. Educators also entice learning by introducing new materials and tools, making variations to activities, and by posing thought provoking questions that challenge children's thinking and promote inquiry.

> *"I posed the question about tallies, so they had been using up to this point, like finding one item and then making, like, one check mark. So, I kind of explained that you know, there's other ways we can represent what we find. And if you want to find lots of a certain item, one way to record it is something called the tally. So, they're like, what's the tally? So, I kind of drew one and said, you know, if you find like 1234, you make 4 lines and the number 5 gets to go right through the middle, and that's how we count when we're finding, like, something one of, finding lots of something so they thought that was really exciting and then they started making their own tallies…"[Rural Community]*

Educators commonly link learning to real-world experiences providing opportunities to explore outside the classroom by taking children on nature walks, walks around the neighborhood, or by bringing favorite books and materials to the outdoor environment.

> *"It was my colleague who did this this week, he took out the -- sofas like the little couches. For child, it is the out outside then we put a cover made that it is like a small living room outside with my books, I have like older books in the box of rubber-bin Books we kept the oldest, but we bring them outside, made that I know that it can break, but this is -- not our favorite books. But we took out the couches and then the children had their book box sitting on the sofas reading books. [Francophone Community]*

Additionally, the data shows educators actively building interest and extending learning by celebrating, acknowledging and show-casing children's interests, talents, and accomplishments. Several educators proudly shared stories of how students overcame challenges or made progress.

> *"…Now with—with pride, I can share this. I—I was. I was so happy that his confidence which we are actually working on is coming out […] Picture actually said it all, I think was the next day we went outside, we took another form of blocks, and he called his friends doing it again and this time around even allow them to come together and they were actually watching him and they were copying what he was doing. So now he's like a mentor to them […] There a lot of information, ideas behind his—his will, his story, his—his interest. And how to also build other aspects of his well-being and every other aspect of learning at the development […] So I brought out, like that particular area of his interest. I focused on it to bring out his confidence…" [ANS Community]*

Reflecting and Documenting. Documentation was a common practice described by educators which involved capturing and recording children's learning experiences, observations, and progress. Documentation in pre-primary often takes the form of photographs, videos, and written notes. Through documentation and thinking back on experiences, activities, and learning moments educators are able to tailor learning opportunities, interest and engage children in learning and support their learning needs. In their stories educators describe how documentation helps them plan and tailor the learning environment, select materials and provide appropriate invitations and provocations.

> *"Yeah, well, they had been making their own checklists out in the playground. So, we do have, like, clipboards […] and they had been taking paper and making their own list. So just like scribble list kind of thing and then going around and finding things that they wanted to find. So, we have a student right now from the Mount, actually. And she was following them one day. Writing down like some of the things they were finding, and so this morning she—she did, like, took pictures of items in the classroom that they had found before and made like a more. I don't know. Prepared list I guess, and just set it out as an invitation. So, they kind of discovered it and just they went with it cause they had kind of done their own thing the day before." [Rural Community]*

Educators keep individual portfolios or collections of children's work that is used for documentation, reflection, showcasing children's learning, and for sharing with children to reflect on and discuss their own work.

> *"...I have their portfolios in there cause their picture is on the front of it so that they can read their name and find theirs, and it's artwork that they picked to put in it. --and then there's like different things that's happened throughout the year, like whether it be like a—a group shot of something we were all doing or like the pumpkin cleaning. So, they'll discuss like pictures that they've drawn what they've added. Why? But they'll also like look at the pictures and tell a story beyond what's written there, kind of thing. So yeah, it's kind of interesting just to sit and listen to them and they'll compare to see if they have something that's similar in theirs." [ANS Community]*

Figure 19

Children Reflecting on Images from Portfolio and Sketching Ideas

Figure 19 displays children engaging in reflective conversations using documented images/videos of activities the children previously did. By discussing the images children recall previous learning experiences and discuss ideas of how they would like to extend on the activity.

> *"And we had talked a bit about floor books when we did the—the night on documentation. So usually when we're following up like with the children to reflect on their learning. This is one way we do it so. I had just brought back some of the pictures from that scavenger hunt that the boys had done and just posed some questions and asked them to kind of retell the events. What would they like to do next with it and do they have any ideas like going forward for their—this type of play, and so they started like sketching some of their ideas." [Rural Community]*

By integrating reflection and documentation into their practices, educators are able to provide meaningful learning opportunities through play and create an engaging environment that supports children's learning and development.

Conclusion

The findings provided relevant information in answer to the two research questions in this investigation: 1. How Can Intentional, Purposeful Literacy-Learning Through Play Support the Foundations of Early Literacy? 2.How Does the Educator's Role Influence the Intentionality and Purposefulness of Play?

With regard to the first question, results reveal numerous pre-primary practices that support the foundations of literacy. Generally, purposeful intentional play provides a positive and engaging environment that fosters a love for learning. As children experience joy and motivation in playful literacy activities, they develop a positive attitude toward reading, writing, and language exploration. In the pre-primary program, children engage in play-based activities that foster foundational literacy skills that emerge at this stage of development. The pillars of literacy instruction that have been identified from the data were oral language, writing, vocabulary development, phonics, phonemic awareness, and comprehension.

With regard to the second question, findings indicate that educators play a significant role in making play purposeful and meaningful. By practicing intentionality educators ensure that learning experiences are purposeful, meaningful, and developmentally appropriate. Educators in the pre-primary program demonstrated intentionality by designing the environment, selecting materials, providing invitations and provocations, building interest, extending learning and finally documenting and reflecting on learning.

Chapter 5: Discussion

Introduction

The aim of this study was to explore how play-based practices in the pre-primary program support the foundations of literacy through purposeful play. Additionally, the study investigated how educators influence the intentionality and purposefulness of play, thus investigating the educator's role in a play-based setting. The research study investigated the following research questions: 1. How can intentional, purposeful literacy-learning through play support the foundations of early literacy? 2. How does the educators' role influence the intentionality and purposefulness of play?

Key Findings

To answer the first question, data collected from participants across different communities in Nova Scotia was analyzed for elements of literacy that correspond with the *Six Pillars of Effective Reading Instruction* (The Nova Scotia Department of Education and Early Childhood Development, 2023), in addition to writing. Key findings revealed that intentional purposeful play in the investigated pre-primary settings was linked to supporting oral language, phonics, phonological awareness, vocabulary, comprehension, and writing.

Regarding the second question, data consisting of images and discussion transcripts was analyzed for elements of intentionality. Key findings yielded intentional practices that participating educators demonstrate in their learning environments. Those intentional practices constitute of, designing the environment, selecting materials, providing invitation & provocation, building interest & extending learning, and finally reflecting & documenting.

Play-based Learning and the Foundations of Literacy

This section discusses the findings relevant to literacy learning through play and the foundations of literacy, and which address the first question: How can intentional, purposeful

literacy-learning through play support the foundations of early literacy? The findings will first be discussed in a broad manner, interpreting main observations and takeaways with regards to literacy learning through play.

In general, it is interesting how the findings support the discourse around the powers of play, providing evidence that play supports advanced skills such as literacy and numeracy. The data showcases children demonstrating advanced literacy skills during purposeful play, such as engaging in deep conversations, meaningful mark making, letter and name writing, reading and re-telling favorite stories.

In the discourse around play and play-based learning, many have claimed the numerous benefits of play in all areas of child development (Baker, 2015; Galbraith, 2022), with respect to its multimodality, its ability to engage children in learning, or its strength in supporting social and communication skills (Dewey, 2012; Gray, 2009). Thus, it is interesting to link between those numerous benefits from the literature and the data in this study. Consistently with prior literature (see, e.g., Fesseha & Pyle, 2016; Gray, 2013; Gronlund & Rendon, 2017; Parker et al., 2022) educators pay tribute to the characteristics of play such as being fun, voluntary, and particularly the characteristic of being child-led. It is clear through findings that when children joyfully engage in play activities of their own choice, they grow interest towards literacy learning. When play is child-led and stems from the child's own interest, the child is more motivated and more likely to stay engaged for longer periods of time.

With regards to the social aspects of play, findings support theories that acknowledge that play offers contextual learning through meaningful social interactions (L.Smolucha & F. Smolucha, 2021; Mehta et. al, 2020). Educators provide numerous examples that reveal rich and meaningful interactions between both peers and adults. Those interactions offer rich

opportunities for developing communication skills, where children engage in the imaginative use of language and use of symbolic representations.

Findings also allude to the multimodality of play, as educators reveal that play incorporates many forms some of which are verbal, gestural, and symbolic which caters to all learning styles and creates an inclusive environment where every child can be engaged regardless of their learning needs. Moreover, findings provide compelling stories of how purposeful play successfully engaged children with challenges or with extra learning needs, where they were not merely able to engage in the learning but moreover work towards overcoming learning challenges.

In conclusion the findings interestingly support evidence provided in the literature that links play-based learning to early literacy, suggesting that play engages and motivates children in learning as well as provides rich and meaningful opportunities for developing foundational literacy skills.

The Six-pillars of Effective Reading Instruction

The six pillars of effective reading instruction are foundational and essential components that contribute to successful literacy development. This investigation used the *Six-Pillars of Effective Reading Instruction* (The Nova Scotia Department of Education and Early Childhood Development, 2023) as a framework to identify the categories and sub-categories of literacy that are supported in the Pre-Primary Program. Additionally, writing, which is deemed an essential literacy skill based on previous studies, has been added as an additional literacy skill. Therefore, this section discusses the connections between findings and the pillars of reading and writing instruction.

As a general observation, it was realized that some literacy skills occurred at higher frequencies than others. For example, elements of oral language and phonics were significantly higher than those of phonological awareness, vocabulary, and comprehension. This may have occurred due to several reasons, such as variability in learning trajectories, developmental considerations, or variability in educator practices, as well as other limitations that are discussed in more depth below. The following discussion sections take an in-depth look into the pillars of reading and writing. Each pillar will be explored, discussing its alignment with the findings and its comparison to existing literature.

Writing

Writing skills are a fundamental component of literacy that begin developing in the early years before school. Early writing skills include print awareness and fine motor skills and draw on other literacy skills such as alphabetic knowledge and phonemic awareness (Cabell et. al., 2013; Pavelko et. al., 2018).

Findings were beneficial in highlighting the strategies used in a play-based setting to support the development of writing skills. It appeared that a literacy-rich environment was an integral contributor to development of writing skills. Within the pre-primary environment children encountered books, labels, signs, and meaningful print in their surroundings. Additionally, purposeful play provided meaningful opportunities for generating text through which children become familiar with the concept that print carries meaning. Children often engaged in activities that require fine motor skills, such as drawing, painting, cutting, and manipulating objects. These activities contribute to the development of hand-eye coordination and fine motor control, which are essential for early writing skills. Purposeful play also offers rich and meaningful opportunities for emergent writing, where children experiment with writing

letters, scribbles, and mark-making to convey meaning. Engaging in such activities during play supports the early stages of writing development and associates writing with joy and fun.

The findings were particularly insightful in illustrating the developmental phases of writing skills. Theories of writing development suggest that children first encounter writing through symbolic representation and scribbling (Puranik & Lonigan, 2009; Tolchinsky, 2003). The images and anecdotes often displayed children using symbols to convey meaning during play or producing scribbles as written communication. Educators' stories provide evidence that children's drawings, symbolic representations, and scribbles actually convey meaning, and are purposeful attempts of written communication. Suggesting that as children play, they show signs of writing development. Moreover, children were often engaged in letter and name writing, which was described in the literature as other early encounters of writing (Cabell et. al., 2013). The occurrence of those various demonstrations of emergent writing, could be a positive indication that the learning environment provides rich and meaningful opportunities for adequate development of writing skills.

Oral Language

Oral Language is the first of the Six Pillars of Effective Reading Instruction, and consists of phonology, syntax, morphology, vocabulary, discourse, and pragmatics. All of which are necessary to communicate and learn through (The Nova Scotia Department of Education and Early Childhood Development, 2023). Being one of the first requisites for reading, and one of the earliest literacy skills that children develop (O'Connor, 2011; Roberts, 2011; Vellutino et al., 2007) it was not surprising that oral language was among the skills of highest frequency in the data. In the pre-school years, children typically spend a large portion of their day in child-directed activities at different learning areas thus are often subjected to conversational

interactions (Whorrall & Cabell, 2016). The images portrayed by the data were similar, where children spent most of their time in collaborative play, heavily conversing and interacting with one another and with educators.

The data revealed correlations with the sub-categories of oral language skills, where they all appeared in the data but at varying frequencies. Syntax came as the sub-category with most correlations, followed by pragmatics, discourse, and vocabulary, whereas there was not as much data relevant to morphology and phonology.

The images and stories were highly valuable in providing an in-depth view of how oral language is practiced in a play-based setting. In the investigation, it was observed that purposeful play encouraged conversations, storytelling, and dramatic play scenarios, all of which contributed to rich language interactions. Through these activities, children developed awareness of sounds in language, vocabulary, the social rules of communication, and the ability to express ideas coherently, thus aligning with the first pillar.

Additionally, the findings shed light on important practices that might have not been adequately emphasized in the literature. For example, it was interesting that some educators used documentation such as images, videos or student portfolios to promote meaningful conversations. By using prompts and posing questions around previous learning experiences, educators engaged with children in deep conversations where they reflected on their learning and discussed next steps. A common practice that appeared to support oral language development, and which aligns with Vivian Paley's curriculum is storytelling and dramatization (Paley,1990). By reading aloud to children, educators support and model spoken language supporting skills such as use of vocabulary, morphology, and syntax, where children hear sentences in proper

word order and experience proper use of sentence parts such as verb tenses, plurals, conjunctions, etc.

Overall, findings show a strong connection between oral language development and purposeful literacy learning through play, demonstrating various ways in which educators create meaningful and rich opportunities for oral communication.

Phonics

Phonics teaches what sounds correspond to which letters and letter-groups, and includes the sub-categories; alphabetic knowledge, application of alphabetic knowledge and word recognition (The Nova Scotia Department of Education and Early Childhood Development, 2023).

Similar to oral language and phonological awareness, phonics is a foundational skill that develops in the pre-school years and is crucial to reading and writing success (Treiman et al.,1998). Understanding the connection between sounds and letters enables children to decode words and recognize familiar words more easily, which is essential later on for reading fluency. Although children do not show explicit reading fluency skills, they are often applying alphabetic knowledge which is a pre-requisite of reading fluency.

Phonics learning through purposeful play in pre-primary is portrayed by findings as a dynamic approach that capitalizes on children's natural curiosity and tendency for exploration. Although play-based learning may not directly emphasize formal phonics instruction, through purposeful play children naturally encounter letter-sound relationships. Findings from this study display children freely forming letters, writing notes, creating cards, or engaging in letter-based activities, thus promoting emergent phonics and word recognition skills that relate to the second pillar.

The findings were valuable in taking a closer look at the various strategies used for supporting phonics learning in a play-based setting. One of the strategies used was letter play, where educators provide engaging initiations that involve exploring and interacting with letters of the alphabet. Letter play involves providing children with a variety of materials such as magnetic letters, letter cards, or play dough for children to manipulate and form letters and words. Educators also used phonics games that involve matching letters with corresponding sounds, such as scavenger hunts for objects that start with a specific sound. Storytelling, songs, and letter art were also strategies commonly used by educators in the study.

Findings also highlight the advantages of phonics learning through purposeful play. One of the most significant benefits of play is that it fosters positive attitude towards literacy learning setting the stage for a lifelong love of reading and writing. Children were clearly engaged as they played and explored with letters and words. Play encourages creativity and imaginative thinking where children can invent stories and games that incorporate phonics elements, making the learning experience memorable and enjoyable. As they actively participate in play children physically and mentally engage with phonics concepts, enhancing retention and application. Consistent with the literature, findings illustrate the multimodality of play. By incorporating tactile elements, visual aids, and auditory cues, play enhances the multi-sensory nature of phonics learning and caters to different learning styles (Daniels, 2021; Olaussen, 2022; Thomas & Jones, 2021).

Comprehension

Comprehension is making meaning from text and encompasses all other components of reading development (Oral Language, Phonemic Awareness, Phonics, Vocabulary, Reading Fluency*).* Five sub-categories underlie comprehension: engagement with text, word recognition,

print concepts and text features, strategic processing of text, and responding to text. All of which were correlated to the findings.

Reading comprehension is considered an advanced reading skill that may not be expected to be fully operative in pre-primary (Cain &Oakhill, 2004; Vellutino et al., 2007) but it remains a primary focus in this study. Pre-primary children may not have the ability to read running text nor have the sufficient vocabulary to decode and comprehend text, but by engaging in purposeful play children have the opportunity to practice narrative skills. This investigation reveals the valuable impact of play-based learning in nurturing children's ability to understand and comprehend written texts.

Through purposeful play, children were exposed to various types of text, developed a love and interest in reading, were introduced print concepts and text features and were encouraged to make-meaning from stories and books. These experiences improve their understanding of story structure, sequencing, and character development which are essential components for comprehending narratives in reading. Through reading, storytelling, role-playing, and retelling favorite stories, children practiced visualization, inferencing skills and understanding narrative structures, which all lead to strategic processing of text. Children visualize mental images while reading and make inferences about characters' feelings or story events, which supports comprehension. Additionally, as children engage with picture books, they practice sequencing skills as they follow the order of events. They use their imagination to extend beyond the mere interpretation of images by making predictions about the plot and characters. These experiences lay the ground for comprehension abilities. Aside from processing skills, as children engage with books and storytelling, they begin understanding that print carries meaning and that text features also support meaning. For example, as children point to words as

they read, they understand the directionality of text, and begin distinguishing letters, words, and sentences. Overall, the findings had numerous linkages with comprehension, showing that purposeful play supports the various aspects of comprehension, engages and motivates children and grows a love for reading books.

Vocabulary

This pillar refers to the words that learners need to know in order to communicate effectively and consists of both receptive and expressive vocabulary. Receptive vocabulary Refers to words that are understood when heard or read, on the other hand expressive vocabulary refers to words used in speaking or reading (The Nova Scotia Department of Education and Early Childhood Development, 2023).

Findings of this investigation reveal the significance of play-based learning in fostering children's language development, particularly in vocabulary acquisition. Purposeful play provides contextual opportunities where new vocabulary is introduced in relevant contexts. Through purposeful play children engage in real-life scenarios, social interactions, and are exposed through diverse play scenarios to a wide range of new words. As they pretend to cook in a kitchen, construct buildings with blocks, or engage in imaginative role-play, children encounter and use words related to these activities, leading to vocabulary enrichment. Additionally, the social interactions among children and educators involved in such play create opportunities for language-rich conversations, where children use new words and expand their vocabulary. Books and storytelling have also provided rich opportunities for vocabulary development, where reading books aloud to children, and using props to support word meaning introduces children to new vocabulary in a meaningful context (Gibbs, 2021).

Findings of this study demonstrate that play-based learning is a powerful and effective approach for fostering children's language development, and thus supports the evidence from the literature that corelates play with a positive effect on vocabulary development. The study findings complement the literature by suggesting that purposeful play provides a contextually meaningful and engaging environment where children actively interact with language, acquire new words, and build their vocabulary (Toub et. Al, 2017; Van Oers & Duijkers, 2013). Another valuable takeaway from the findings, is how purposeful play encompasses research-based vocabulary teaching practices such as, providing purposeful exposure to new words, teach word meanings, and offers word-learning strategies and meaningful opportunities to use newly learned words (Christ & Wang, 2010)

Phonological Awareness

Phonological awareness comes as the second pillar and is a broad skill that includes hearing and manipulating units of oral language such as word, rhyme, syllable, onset-rime, and phoneme (The Nova Scotia Department of Education and Early Childhood Development, 2023).

Findings reveal that through purposeful play children were involved in book reading, songs, and wordplay, all of which support the development of phonological awareness. The investigation showed that children engaged in various playful activities that focused on identifying and manipulating sounds in spoken language. These experiences laid the foundation for phonological awareness skills, thus corresponding with the third pillar. According to Roberts (2011), phonological awareness is the anchor between speech and writing. Children demonstrate this connection between spoken and written language as they begin to spell familiar words, names or produce text.

In spite of the connections made with phonological awareness from the data, the images and examples did not include strategies that educators use to support phonological awareness through play. Within the same pillar, some sub-categories occurred more than others. For example, there were no direct connections made from the data in support to rhyme and syllable, whereas connections made to word and phoneme were relatively higher. This may imply that educators may focus on some skills such as oral language and phonics, more than others. Or that perhaps some aspects of phonological awareness may require more explicit instruction. Again, developmental aspects maybe considered here, where evidence from the literature suggests that development of phonics skills may precede phonological awareness. This explanation corresponds to Treiman's theory that suggests that mastery of letter-sound correspondence precedes the ability to decode and construct words (Treiman et al., 1998; Treiman, 2000). In the pre-primary program children are at the emergent stage of acquiring alphabetic knowledge and have not yet approached mastery. This may be an explanation of why they still do not engage frequently in activities that support phonological awareness.

Reading Fluency

The fifth pillar is reading fluency and involves the application of alphabetic knowledge with fluency, accuracy, expression, and appropriate pacing (The Nova Scotia Department of Education and Early Childhood Development, 2023).

Fluency is not a primary focus for pre-primary children. Although some of the children may be able to decode and read at this stage, fluency is a characteristic of skilled reading that requires both speed and accuracy (Seidenberg et al., 2020) which are skills that are not expected until the age of six (Kim, 2015). The research findings correspond to the literature in this sense, where no explicit elements of fluency were found in the data. Even though reading fluency does

not directly connect to the investigated pre-primary practices, pre-requisites of frequency such as alphabetic knowledge, phonics and phonemic awareness were supported. Additionally, play activities such as engaging in storytelling and dramatic play scenarios may indirectly support reading fluency thus tangentially relating to the sixth pillar.

Overall, the results of the study demonstrate a strong connection between play-based learning and the six pillars of effective reading instruction. By supporting oral language development, phonics, phonological awareness, print awareness, vocabulary and comprehension, play-based practices offer a holistic and engaging approach to early literacy development. The findings highlight the value of purposeful literacy learning through child-led play during the pre-primary years in preparing children for future reading and writing success.

The Educator's Role

This section discusses the findings relevant to intentionality and the role of educators in a play-based setting, and which come in answer to the second research question: How Does the educator's role influence the intentionality and purposefulness of play?

Comparison with Literature

With regards to intentionality and educator's role, key findings underscore the importance of educator's role in providing a learning environment that supports and nurtures foundational literacy skills. Findings showcase the efforts of educators in planning and designing every aspect of the learning environment as well as the numerous opportunities that children encountered as a result of educator's intentionality. Therefore, findings support the views from the literature in favor of adult interventions and intentional play. Moreover, the findings highlight the role of intentional practices in maximizing the benefits of play and making it a rich medium for supporting literacy skills.

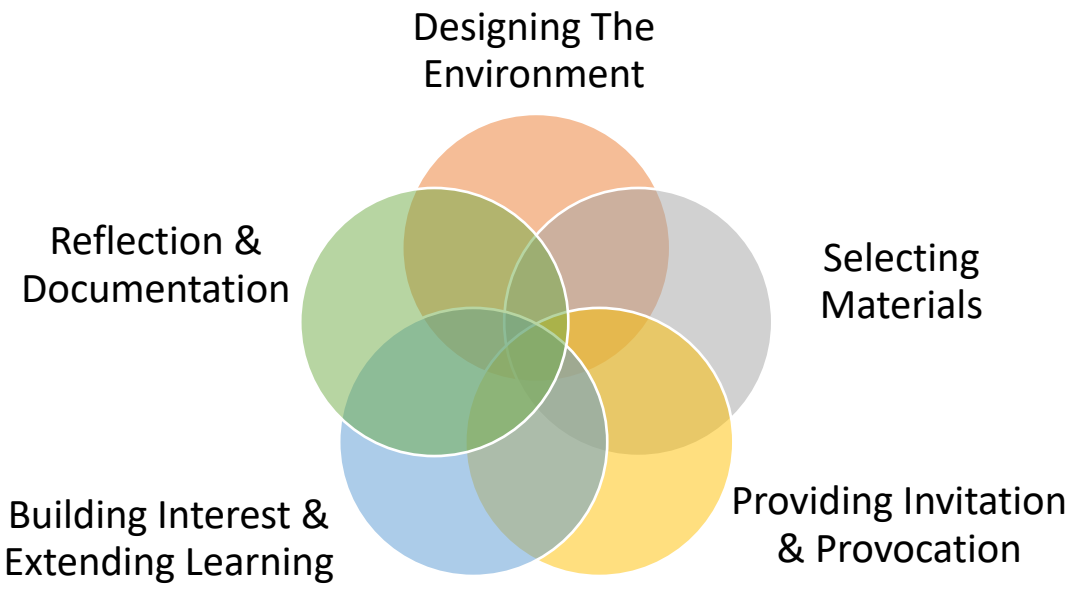
The portrayed educator practices are coherent with the role suggested by the literature where the educator's role is to plan, guide and facilitate child's play. The findings show how educators make a balance between intentionality and flexibility in order to maintain an environment that is child-led, engaging, and meaningful. Educators plan invitations and provocations according to children's interests and reflections. When designing the environment and selecting materials, educators aim to foster certain developmental skills, as well as cater to children's interests and needs. Educators take children's lead in planning activities, designing the environment, selecting materials and in setting up invitations and provocations. The environment highly encourages freedom and autonomy, where children have the choice to move materials around, play with materials and manipulate them according to their own choice. Thus, educators are able to maintain the attributes of play concluded in the literature as 'child-directed and open-ended' (Eberle, 2014; Fesseha & Pyle, 2016; Grey, 2013; Gronlund & Rendon,2017; Pyle & Daniels 2017). Additionally, educators demonstrate the balance described in the literature between practicing intentional and responsive involvement and avoiding the negation of the authentic qualities of play (Gronlund & Rendon, 2017).

Intentional Practices

Findings of this study reveal five main intentional practices that were demonstrated by participating educators in pre-primary. Those practices appeared to be strongly tied and deeply interconnected. Each practice was interchangeably involved or dependent on the other to the extent that it was extremely difficult to speak about one practice without referring to others. The following Venn diagram visualizes the relationship between the identified intentional practices.

Figure 20

Relationship Between Intentionality Practices



Designing the environment, in the context of this study, refers to the intentional and thoughtful arrangement of physical spaces, materials, and resources to create an optimal learning and developmental environment for young children. By carefully designing both the indoor and outdoor environments, educators support all aspects of children's learning and create opportunities for conversation and collaboration (Leggett & Newman, 2017). Findings reveal that designing a rich and nurturing environment involved several other intentional practices. One of the intentional practices that was closely connected to designing the environment was materials. The careful selection of materials and their accessibility was an integral part of

environment design. By thoughtfully choosing materials and resources that are open-ended and align with children's interests, educators where able to create an environment that is nurturing and engaging at the same time (Edwards, 2017). By making materials and resources accessible to children (low shelves, open containers, clear labels), educators promoted autonomy allowing them to independently engage in activities and make choices.

Documentation and reflection are intentional practices that are also associated to several other intentional practices. Through reflection, educators assess effectiveness, identify areas for growth, and make informed adjustments to the learning environment, selected materials, and to the offered invitations and provocations. By observing, documenting, and reflecting on observations, educators can practice responsiveness by re-planning aspects of the learning environment to better meet children's needs (Shin & Partyka, 2017).

Providing invitations and provocations involves the intentional arrangement and presentation of materials in a way that encourages children to explore, interact, and engage in the learning process (Fink, 2014). Whether they are books, toys, loose parts, or nature elements, materials entice children's play and boost motivation, making materials the building blocks of invitations and provocations. Moreover, invitations are not limited to objects or materials (Kaynak-Ekici, 2020), educators designed learning invitations using questions or discussions built around children's experiences.

Building interest and extending learning is illustrated by findings as the intentional efforts and strategies employed by educators to capture and engage children's curiosity or enthusiasm towards a particular topic or activity. It involves being responsive to a child's interest to develop their desire to learn or explore a topic further. dependent on reflection and documentation, selection of materials, and environment design. Through reflection and documentation, educators

note children's interests, recognize, and acknowledge individual strengths and preferences, and tailoring learning experiences in accordance with interests and preferences. Additionally, building interest and extending learning is brought about through designing the environment, selection of materials, and the careful planning of invitations and provocations.

In conclusion, designing the environment, selecting materials, providing invitations and provocations, building interest, extending learning, reflection and documentation are intentional practices that intertwine to create a nurturing, inclusive and engaging pre-primary learning environment. The interconnectedness of intentional educator practices in pre-primary education ensures a comprehensive and purposeful approach to children's learning and development. Purposeful environmental design enhances play-based experiences, and reflective practices guide educators in continuously improving and tailoring their instructional strategies.

Strengths and Limitations

Every research method comes with its own strengths and limitations, and it is essential to assess and acknowledge those strengths and limitations, not only to promote transparency, but to highlight areas for improvement and inform future research directions. This section discusses the strengths and weaknesses of the study with the aim of providing a nuanced understanding of the study's significance and its boundaries.

The Strengths of this study encompass the aspects of rigor and trustworthiness which are critical in conducting high-quality qualitative research (AmanKwaa, 2016; Harrison et al., 2001; Rolfe, 2006) and are intrinsic to every stage of the research process (Harrison et al., 2001). According to Lincoln & Guba (1985) rigor and trustworthiness are a measure of credibility, transferability, dependability, and confirmability. This research study used data collected through visual methods, which enhances the richness of data, adds validity, and increases the

trustworthiness of the findings (Glaw et al., 2017). The Numeracy and Literacy project used a visual methods approach that acknowledged participants as experts in their own lives as well as enabled empowerment and collaboration.

Credibility is a measure of how truthful the findings of the research are and how accurate the experiences of participants are represented (AmanKwaa, 2016). The data under study had been collected in a participatory manner, where participants were actively engaged in the process of production and interpretation of documentary images. Credibility was further enhanced by the use of more than one form of data, which are the documentary images and the participant descriptions and discussions.

Transferability refers to the extent to which the findings of a study can be replicated in other contexts or settings (AmanKwaa, 2016; Morse, 2015). Transferability in this study was enhanced by providing rich and detailed descriptions of the study setting, participants, data collection and data analysis so that readers can assess the applicability of the study to their own settings. Additionally, keeping a detailed reflexive journal throughout the phases of the investigation served as in-depth documentation enough for consumers to obtain a vivid picture of the occurrences of the research study. The journal served the purpose of documenting my reflections, thoughts, and insights as I progressed along the data analysis process, where my reflections included documentation of functional aspects of the process as well as the decisions taken. Reflections included initial expectations, thoughts, discoveries, challenges, and the inquiries raised by interacting with data as well as the decisions taken in response to those reflections.

Dependability refers to the consistency and repeatability of the research findings over time (AmanKwaa, 2016; Morse, 2015). In qualitative research dependability of a study does not

require replication of results but is rather the ability of a study to be applied usefully in other contexts (Morse, 2015). This research study intends to establish dependability by being transparent about any changes that will be made in the research design. Additionally, I conducted periodical meetings with my supervisor who was involved in supporting decisions, addressing inquiries, reviewing, and refining findings to make sure the data was accurately represented.

Finally, confirmability is a measure of the neutrality and objectivity of researcher's interpretations and conclusions. Although qualitative research is subjective in nature, a degree of objectivity can be achieved through a rigorous and systematic approach to data collection and analysis and commitment to transparency and reflexivity (AmanKwaa, 2016; Morse, 2015). In visual research perspective, reflexivity in data analysis is achieved when the interpretation of images stems from participants rather than the properties of the images themselves (Guillemin & Drew, 2010). In this study researcher's bias has been considered by reflexivity of researcher's practices throughout the study. As well as practicing mindfulness of how the researcher's own views, positionality and experiences influenced the approach towards data analysis and the generation of findings and conclusions.

This research study followed a qualitative, exploratory design that involved secondary data analysis of images and transcripts as a result it is important to reflect on possible limitations of the design that may have influenced the outcomes. Since the study uses secondary data from a larger project that has been previously collected by someone else and for different purposes, not all the data was necessarily relevant to the purposes of this study, which may have impacted the study's ability to establish strong connections between purposeful play and some of the pillars. For example, as part of the larger project, participants attended an information session prior to photo elicitation that guided the images they took and the stories they shared. Since the larger project had broad purposes, the participants were not particularly informed of the six-pillars of reading instruction, and therefore were not necessarily focused on documenting occurrences that are relevant to each of the literacy skills.

An additional limitation associated with data collected for broad purposes; is the diversity and vastness of available data and the significant time and effort associated with familiarizing oneself with the data. Despite having the advantage of previously interacting with some of the data while assisting the ECCRC team in coding some transcripts, significant time was spent to determine which sets of data were relevant to this study’s research questions.

Another limitation encountered during this study was the use of specific definitions. While precise definitions helped in coding data accurately to the designated categories and sub-categories, they may have excluded data that was relevant but not exactly coherent with the definition. For example, while some data was relevant to rhyme, they were not included for not being consistent with the definition of rhyme.

Language posed an additional limitation in this research study, where data relevant to the Francophone community unlike other groups was in French rather than English. As a researcher

who does not read or comprehend French, I relied on an automatic translation of transcripts from French to English. Translations may be less accurate than the original language and may not convey the same meaning as intended by the participants, therefore influences the accuracy at which the data is represented.

Developmental considerations are one of the limitations encountered in this study, that might have influenced findings. Some literacy skills may still be emerging in pre-primary, or some skills may precede others thus influencing their occurrence in the data. Similarly, children in pre-primary settings may naturally exhibit a wide range of developmental trajectories (Lonigan et al., 2000), where some children may have developed some literacy skills more than others, which influences the frequency at which those skills appear in the data. Additionally, educator's intentional practices, the way they plan the learning environment and the invitations and provocations they offer may also influence the literacy skills observed during play. Educators' intentional practices may in turn be influenced by external factors such as curriculum, years of experience or professional development received which depicts pedagogical practices and consequently the outcomes of the study (Bubikova-Moan et. al.,2019; Jacoby & Lesaux, 2018)

Implications for Educational Practice

This study involved the investigation of experiences of pre-primary educators in supporting the foundations of literacy through purposeful play and has provided rich insights into how play-based learning influences different aspects of literacy development. The findings of this study can be valuable to educators, policy makers and parents.

The findings of the study highlight the foundational literacy building blocks that occur in a play-based environment such as the Pre-primary Program. Thus, drawing attention to the use of

child-directed purposeful play to achieve specific literacy learning goals. It's important to view these findings as an opportunity for refining instructional approaches of literacy learning. The Nova Scotia Department of Education and Early Childhood Development (2023) recommends systematic and explicit instruction to support literacy from grade primary to grade 2. Policymakers can use the study's findings to advocate for the inclusion of play-based learning in early childhood education policies and consider integrating play-based strategies into literacy-focused curricula.

The findings of this study may be valuable to literacy educators in the elementary program, where the curriculum is not entirely play-based, and may incorporate explicit and direct instructional methods. Particularly primary educators, where children transition from a play-based to an elementary curriculum and may benefit from a more child-directed approach. Educators can leverage the insights from the study to adopt more informed and intentional pedagogical practices. Understanding how play-based learning contributes to different literacy pillars empowers educators to design more effective learning experiences.

The research study has also investigated the role of educators in a play-based environment, suggesting intentional practices through which educators can purposefully utilize play to support the foundations of literacy. Therefore, the study not only sheds light on the benefits of purposeful play in supporting the foundations of literacy but moreover suggests how this can be achieved through intentional practices.

The study's findings can also impact parent and community engagement in the learning process. Communicating and informing parents of the benefits that play-based learning offers to literacy development can encourage parents to support play-based instructional practices and

adopt similar activities at home, thus enhancing parent engagement with the child's educational journey.

As a long-term impact, the findings of this study may prompt further research on specific play-based strategies that may contribute significantly to different pillars of literacy. This study may also prompt research that asses the long-term effects of play-based approaches on literacy skills as children progress throughout their education.

Overall, by exploring the correlations between play-based learning and the pillars of literacy, this study can have far-reaching implications for educators, researchers, policymakers, and parents. These implications guide the development of more effective educational practices, curricula, and policies that harness the benefits of play to foster well-developed literacy skills in young learners.

Knowledge Mobilization

The key findings of this investigation can be used in a number of ways for knowledge dissemination and promoting awareness of play-based literacy practices. These findings will be made accessible by Mount Saint Vincent University through its library and online thesis archive. Additionally, a visual report summarizing the findings of this study will be shared with the Nova Scotia Department of Education and Early Childhood Development, to inform future decision-making regarding literacy instructional methods in elementary education. Lastly, the study can be used to produce two published articles. The first will contribute to the discourse around the purposefulness of play, and the second around the educator’s role and intentional practices in a play-based environment.

Recommendations

The study's findings suggest a need for more comprehensive and robust research to explore the correlation between purposeful play and the foundations of literacy. It is recommended that this study be conducted with a group of older children, possibly grade 2, where advanced literacy skills such as reading fluency and comprehension would be expected to have emerged.

Conclusion

This research study aimed for two focal objectives. The first was to investigate the correlation between intentional purposeful literacy learning through play and the foundations of literacy. The second was to explore the role of educators in influencing the intentionality of play and in fostering literacy skills.

With regards to the first objective, the analysis of images and educator anecdotes revealed numerous practices that support the pillars of literacy. The foundational pillars of literacy investigated in the study were: oral language, phonological awareness, phonics, vocabulary, reading fluency, comprehension, and writing. Despite being a part of the investigation, reading fluency was not a focus in this study, as it is an advanced skill that is not expected in pre-primary. Connections were made with seven of the pillars, but some connections were stronger with some pillars compared to others. For example, more information was provided on supporting oral language, phonics, and comprehension in comparison to vocabulary and phonological awareness. Moreover, the findings provided detailed information about the instructional strategies used and the impact of play on the development of those skills.

With regards to the second objective, abundant elements of intentionally were found in the images and anecdotes, revealing the substantial influence that the educators' role has on the

intentionality and purposefulness of play. The intentional practices from the findings were summed up to five main practices that resemble the educator's role. Those five practices are: designing the environment, selecting materials, providing invitations and provocations, building interest & extending learning, and documenting & reflecting. It can be concluded from the findings that those five aspects of intentionality are inter-dependent and together they enable the creation of a rich and nurturing environment for learning.

Taking a collective look at the findings, several valuable conclusions can be made. Through this study one can perceive the importance of the early years in shaping the trajectory of literacy and language development in children. The findings shed-light on the numerous requisites and building -blocks of language development that children encounter in pre-primary or the years before school, making it such a crucial period in a child's life that both depicts and predicts reading and writing success.

The outcomes of the study provide sufficient evidence that play makes a significant contribution to literacy learning, offering numerous developmental and social benefits. Moreover, by combining learning with joy and drawing on children's natural curiosity, play promotes lifelong love for reading and writing.

With the outcomes provided in this study it becomes evident that intentional purposeful play is not just an incidental activity but a deliberate strategy that empowers children's literacy development in remarkable ways. The findings illustrate the linkages between play, intentionality, and literacy learning, where one weaves into the other. The bonds between intentional purposeful play and literacy learning are reinforced by the interplay of educator guidance and child autonomy. Within this equilibrium, educators guide play experiences that have been meticulously designed to entice and invite children to literacy learning. Meanwhile,

children with their diverse backgrounds, learning styles, and individual developmental trajectories, steer their own learning by interacting uniquely with intentional purposeful play.

In conclusion, having embarked on a journey to explore the correlation between intentional purposeful play and literacy learning, this study has uncovered the profound impact that this affiliation can have on young learners. Through a comprehensive review of literature and an in-depth analysis of data, this research has drawn attention to the significance of intentional purposeful play as a powerful vehicle for fostering literacy development in the early years.

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